The Builder.

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North London Crematorium, Finchley-road.—Messrs. Ernest George & Yeates, Architects ..... *Double-Page Ink Photo.*
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Architecture at the Paris Salon.

THE present year starts a new epoch for the Paris Salons, for having been driven about, for several years back, from one position to another, since the commencement of the preparations for the 1900 Exhibition, they have now at last got into a building which is to be their permanent home for many years to come, viz., the Grand Palais de l'Art which was erected in connexion with the Exhibition in the first instance, but also as a permanent art-gallery for the future. The building seems almost to have been designed with a view to providing for the separation of the two Salons, the Old and New; since the plan, as described last year, consists of two main divisions, differently arranged and treated, but connected internally. The larger division of the plan, next the gardens, consists of a block of building in this shape ⊥ with a grand double staircase in the shank opposite the main entrance; this has two stories of galleries surrounding a great central court roofed with glass. The other division forms a long block joining on to the shank, and nearly but not quite parallel to the larger block, the line of its outer façade being governed by the line of the Avenue d'Antin, to which it faces. In this block there is a circular central hall and dome, with staircases ascending to right and left parallel with the long elevation; and in this block, which is the smaller but architecturally the more effectively arranged of the two, the new Salon has its abode, the larger block, with nearly the whole of the central court, being occupied by the Old Salon. The amicable arrangement by which, at the Galerie des Machines, one entrance fee admitted to both Salons, has been abandoned; there are separate entrances, and a "wicket" between the two Salons, which cannot be passed in either direction without payment. The arrangement is not convenient, nor is it the best in the interests of the two exhibitions.

In our title we have only named "the Paris Salon" in the singular number, for at the New Salon there is this year no architectural department worth mention, the exhibits being confined to a few specimens of furniture designed by architects. At the Old Salon the upper story of galleries is devoted to paintings, the ground stories to engravings, drawings, and architecture, the latter occupying one-half the ground-floor space, so that it is provided for in a better and more dignified manner than at the Palais de l'Industrie, where it had only two rooms and the gallery round the central court, into which no one ever went. It cannot be said that the present architectural galleries are very much frequented, but they are part of the main suite, at all events.

As usual, the leading exhibit of the year is one of those collections of classic restoration drawings on an immense scale, which come from the Villa Medici. This is M. Tournaire's "Delphi"—drawings of the actual state of the ruins, and a complete restoration of the whole site. As to the disposition of the temples and shrines, the *état actuel* gives more data than is the case with many of these restorations. The restored elevation shows a crowd of temples, shrines, treasure-houses, &c., rising up the hill and flanking the Sacred Way, and at the top the long side façade of the Doric temple, with an ugly break cut out of its line of roof for a hypæthral opening, with an effect which seems in itself the best argument against this theory of the mode of lighting a Greek temple; the Greek architectural eye would surely never have put up with that. Towards the right of the mass of buildings is a colossal nude statue of Apollo. There are two exceedingly good drawings of two of the recovered bronze statues in their actual state, and a drawing of a curious column, for which we are not given the data, in which the fluting is interrupted at regular intervals by a growth of acanthus leaves. If this is a true detail, based on facts, it adds to the other evidence, which crops up from time to time, that Greek architectural design was not so devoid of varieties and even eccentricities as we are in the habit of supposing.

Besides the usual classic restoration scheme from Rome, we have also the usual ultra-sublime conceptions of the students of the Ecole des Beaux-Arts at home, who are given an abstract idea to put into architectural form, without apparently the slightest limiting condition as to size, cost, or practicability of execution. This year the subject is "Monument aux Héros de l'Indépendance," and the design made by M. Ferret and M. André Collin for this (numbered 3,801 in the catalogue) contains some really fine ideas in architectural treatment, the whole spoiled and the scale reduced by the enormous colossal figure cut in the rock above it. There are two or three other drawings by competitors in the same subject, which are simply preposterous, and represent things which, in a practical and economic sense, could never possibly be built. Is it any real benefit to architectural students to be encouraged to do this kind of thing? It is so easy to be sublime (on paper) when you are left without any limits as to size or cost; it would surely be better if students were either given the limit of size of the site, or a limit of proposed cost. It would be much better practice for them to see what effect they could produce within that limit, than to draw out these architectural nightmares.

Apart from these, there is rather more representation of current architecture actually carried out, or to be carried out, than we usually find among the Salon exhibits. Among these is the new Hôtel de Ville of Versailles, by M. Le Grand, illustrated in a fine set of drawings. It presents the usual general type of a French suburban hôtel de ville, with high roofs and a flèche or spirelet on the ridge, and triple entrance doors in the centre of the ground story; but it has a character of its own, produced partly by the bold projection of the two ends of the façade, partly by the breadth of treatment of the upper story with its coupled rusticated columns and mullioned windows between; in the photograph from the actual building it looks even better than in the drawings. M. Doré exhibits the drawings of his Hôtel de Ville for Lens, a building of considerable originality, in a very free Renaissance style; the principal story shows large square-headed windows with a carved enrichment worked along the top and half-way down the jambs, the rest plain—a piquant effect. Above these windows is a very boldly-carved frieze in high relief, of figures and scrolls combined.

Two of the best, perhaps the best, exhibits of recently executed work are shown by M. Hermant; the Caserne des Célestins,

Boulevard Henri IV., and the houses forming Nos. 132 and 134 in Rue Réaumur. The caserne is a military barracks in three blocks separated by a space and entrance gates; in the general design of the blocks there is a certain similarity, but the centre block is kept lower than the side ones, and the outer blocks have a modillion cornice, the centre one a plain cornice. On the other hand, the entrance in the middle of the centre block is the ornamental point of the building, with decorative iron gates of fine design, and sculptured spandrel figures above the arch. This centre portion is shown in a remarkably fine and very large washed detail elevation, about as fine an example of architectural drawing as one could wish to see. The whole design is an excellent example of interesting treatment given to a practical building, without over-ornamenting it or departing from its true character; the slight variation of design between the outer and the centre blocks gives a good effect of contrast, while the strong rusticated ground story, the same in all three, binds the whole together. The Rue Réaumur buildings form an immense block of apartment houses, with the windows, above the ground story, grouped under lofty arched bays, and enriched with well-designed iron balcony grills; above the entrance a block is carried up as a kind of tower, with bold rusticated treatment and a cupola over; the upper part occupied by a clock face supported by carved figures in low relief. This and the "caserne" are among the class of works in which French architects are seen at their best, where the problem is to give some architectural interest to an essentially utilitarian building.

Among ideal compositions one is shown which is not utopian, and which might very well be carried out with fine effect. This is M. Henry's "Monument à la Concorde," a design for a monumental architectural screen to be erected across the west end of the Tuileries Gardens, and therefore flanking the east side of the Place de la Concorde. It consists mainly of a colonnaded and vaulted loggia, straight at the two ends and parallel to the Place de la Concorde; the centre portion is recessed by means of two quadrant colonnades falling back to a triumphal arch gateway, the axis of which is of course in line with the axis of the fountain in the centre of the Place. This leaves an open space, the centre of which is proposed to be occupied by the monument to "Concorde," a pyramidal sculpture group in bronze. The design is fully illustrated by plan, elevations, and perspective drawings; it is highly creditable to its author, and a design which could be carried out at no abnormal or disproportionate cost; and it would render more complete the fine vista of architectural effect extending in one axis from the Arc de l'Etoile eastward to the court-yard of the Louvre.

In church architecture there is not much of interest shown—there seldom is much of modern church architecture at the Salon, and what there is is usually little sympathetic to the English eye. For modern churches the French seem for the present to have settled down to a kind of hard and somewhat clumsy neo-Romanesque, the designs showing generally little charm either of grouping or detail, though there are sometimes new ideas in planning, as in M. Eschbaecher's "Projet de l'église pour le ville de B——"; but one never knows exactly whether these "projets" are *bonâ-fide* or not. Among the modern designs for churches the only one which pleased us at all was the competition design for a church at Grenoble by M. Chesnay; this is not a Romanesque but an Italian design, with a campanile at the south-west angle; the exterior is illustrated in a pretty sketch, the interior in a perspective showing a very elaborate scheme of colour decoration, in which the prevailing tone is a little garish; but there is much more refinement of style and detail in this design than in most of the Gothic ones. France was the cradle of Gothic architecture, but the feeling for it has fled from modern France. The best drawings the French architects of to-day produce in connexion with mediæval work are their restorations of half-ruined mediæval structures, which are always admirably drawn. An example is shown in M. Ernest's "Abbaye de Longpont: Essai de Restauration." Apparently the nave remains up to the crown of the aisle vaulting, and part of the east end with the flying buttresses, and sufficient of the transept and west-end walls to offer pretty good data for restoration. The drawings both of the existing remains and the restoration are admirable in completeness and finish.

Among theatrical designs is an Ecole des Beaux-Arts design (as we take it to be) of a "Projet de Théâtre pour une petite Ville," by M. Paul Huillard, which shows how everything is exaggerated in these academical designs; the design is quite beyond and out of keeping with a "petite ville," and looks more as if intended for a principal street in a large city. That we take to be an effect of the competition in the preparation of ideal designs on an enormous scale, already referred to; the Ecole des Beaux-Arts student loses all feeling for simplicity and restraint in architectural design, and cannot design a theatre ostensibly for a small town without trying to give a grandiose effect to it quite out of keeping with the assumed circumstances. M. Gosset exhibits a "Projet de Théâtre populaire," the special object of which seems to be to provide a system of exit doors all round the back of the auditorium, at equal distances. The plan seems a good one enough for the purpose. As far as we observed, there are no plans of actual recently-built theatres exhibited.*

There are some examples of domestic architecture which are of interest to the English visitor, from the special treatment of the plan and arrangement, arising out of French habits of living. Among these is M. Van der Boyen's "Hôtel, Rue de Lota," shown in a nearly complete set of plans, elevations, and sections. This small plan shows three staircases; the first a semi-circular staircase as dignified as the space will allow, from the porte-cochère entrance to the lobby outside the entertaining-rooms, of which the salon occupies the whole front of the plan, and the salle-à-manger most of the side space between it and the courtyard. From this point commences the "escalier de famille," leading to the diminutive bedrooms, &c. The salon, with its curved and painted ceiling, is evidently, for the size of the house, a most sumptuous room; it is a case in which everything is sacrificed for a spacious appearance in the entertaining rooms. The clever planning of the other rooms, however, and of the servants' stair, is worth attention. The front elevation shows a stone basement with brickwork above and a good deal of colour introduced into it; an unusual treatment in a Parisian house. Among other examples of domestic architecture one of the best is M. Paumier's "Hôtel de M. de B . . . , à Paris." Architecturally this is more in the usual style of the Paris private house, with some nice little points in the detail, such as the suggestion of an Ionic volute in the treatment of the crowning moulding above the windows. There is a good deal that is good in the plan, although we observe on the upper floor the old blunder of French planning, the internal water-closet with no window or ventilation, which French architects seem still unable to part with. M. Dussart's "Une Villa au Bord de la Mer" is a picturesque house with an angle tower with balcony rising from a lofty bastion of masonry; the whole is very picturesque, but it is rather doubtful whether it is not a castle in the air rather than an actual house. M. Degrève's "Habitation de Campagne" is less eccentric than the designs we usually find under this title in the Salon; the lower walls are built of herring-bone brick or tile work with stone angles, the upper portion half-timber. In M. Pottier's "Villa de M. P. . . ." we have the "Maison de Campagne" in all its tawdriness of barge-boards run mad, as also in another villa by M. Bernard, capped with enormously projecting roofs, as if it had a bonnet on. This may perhaps have a practical defence as a means of keeping the sun off the walls, but the appearance is very bad.

M. Perronne's plans and model of the "Pavillon de Chirurgie, à l'Asile Clinique" are worth attention, and appear to represent an executed work, though the locality is not stated. Two large rooms with semi-decagon bays form, on the ground plan, the operating rooms, connected with rooms for the sterilisation of instruments, for anæsthesia, &c.; situated between them is the surgeons' room, with a bathroom opening out of it. The whole building is very carefully and practically planned.

In connexion with the recent exhibition we have M. Louvet's drawings of the Palais des Beaux-Arts, and M. Formigé's studies for the admirable Roumanian pavilion, including a very fine coloured detail elevation. This was one of the best designed pavilions in the great Exhibition. Then there are two models which are worth attention. One is that of a funeral monument to a poet, whose initial only is given; it consists of a stele bearing the bronze bust of the poet, on a capital of rather Byzantine type; a nude female figure is prostrated at the base, clasping the stele in an attitude of grief. It is this figure, full of expression, which gives the real value to the design. The other model is also sepulchral; it is that of a mausoleum of a private family, and takes the form of a kind of apse, in horse-shoe shape both in section and plan; in the centre of the floor is a sculptural group, and floor and wall are decorated with conventional foliage designs, probably in-

* As those of our readers will know who have been in the habit of visiting the Salon, it is impossible to find the whereabouts of anything from the arrangement of the catalogue.

tended to be executed in mosaic. M. Narjoux's "Château de Chambeau — Construction et Restauration," does not show in what the "restoration" consists nor how far it is carried; but this is a beautiful set of drawings of a house in château style, very effective in grouping, and very quiet and refined in general character. M. Taillens' design for an "Auberge-relais" (a posting-inn), apparently a "projet" only, is picturesque and original, with its large arch opening into the courtyard and decorated with sculpture suitable to the occasion; this portion of it is shown in a pencil detail elevation on large scale. M. Ridel's grille for a garden enclosure is an excellent piece of metal design, very different from the English school, but good of its kind. This cannot be said of the Pavilion of the "Société des Aciéries" erected in the recent Exhibition from the designs of M. Botrel; masonic forms of architecture imitated in metal. In connexion with this class of work may be mentioned M. Meissonnier's design for a lamp for electric street lighting, "Eclairage par lumière diffuse"—a lamppost with a kind of umbrella feature at the top, the under surface of which is a reflector; the electric light strikes directly on that, and is hidden from the eye of the spectator, who only has the reflected light. This is an idea which was long ago suggested in England as a method of lighting interiors. Among these miscellaneous items may also be mentioned the interesting design of the "Bibliothèque Schoelcher" at Fort-de-France (Martinique), by M. Picq. This is a decorative treatment of a library and small museum standing alone on the beach (apparently), designed with a rather playful adaptation of classic details, and certainly a very original little building.

Among what may be called the "ideal" designs not previously mentioned—*i.e.*, designs which are merely conceptions on paper, is a very grandiose one by M. Bois for a school of artillery and engineering; a design of M. Dehaudt for a provincial Conservatoire of Music and the Fine Arts, which illustrates the good effect that may be got by contrasting a richly decorated central block with two nearly plain wings, only ornamented by carved festoons between the upper windows; and M. Auburtin's design for a Palace for the reception of Sovereigns at Paris; an immense drawing showing a design which is fine in the general laying-out both of the building and the grounds, but contains only commonplaces in detail.

Among the large number of drawings illustrative of ancient work one of the most interesting is M. Chauvet's elevation of the woodwork and fresco paintings decorating the ancient manoir of Challant, at Issogne. The frescoes fill up the arches above the line of the wainscotting, and appear to be illustrations of industrial arts. The perfect manner in which the surfaces of wood and the masonry of the doorway, with its alternate white and bluish stone, is imitated, is quite a triumph of realism. The walls of the old house are scribbled over with curious inscriptions in old French, some of which are given. One runs as follows:—

"L'esprit humain ne se doibt hazarder de contredire aux dieux ou retarder leur volonté, la puissance divine et du tout grande et faut qu'elle domine."

On the stone jamb of the door in the principal drawing is an inscription roughly chalked and carefully copied in the drawing to the effect (not quite legible) that he who speaks ill of another may not enter by this door, concluding "car que d'aultry mal dira le diable lemportera."

Among other illustrative works we may mention three careful sets of drawings by M. Paquet of three Romanesque churches, those of Rhuis, Pompoint, and Fontenay-lès-Louvres; the plans of these are interesting. The curious little Palais de Justice of Briollay, a single rectangular building with a room partitioned off inside, is the subject of a set of drawings by M. Le Tourneau. M. Delaporte exhibits six good water-colour drawings in the grounds at Versailles. There is a view of Carcassonne by M. Pulsifer, and a very fine set of drawings by M. Pottier-Delinge of the ancient and celebrated château of Villers-Cotterets; the pencil sketches of detail are particularly good and very interesting, for the carved detail of this château represents the finest class of decorative work of the French Renaissance. Then we notice a restoration of the piscina of the church of "Ferté-Bernard," by M. Viatte, which introduces us to a most curious and interesting piece of Renaissance church detail; a photograph of its existing condition is added—the restoration does little more than complete some broken and partially defaced features.

It is regrettable to observe that the fine colossal statues of the arts, in white stone, in the portico of the Palais des Beaux-Arts, have already suffered so much from rain-stains as to have a rather unhappy appearance. Perhaps this will be least evident when the whole surface gets somewhat toned down by weather.

NOTES.

The Structure of Memory.

AT the Royal Institution, on Friday the 3rd inst., Dr. Mercier gave a lecture on the subject of "Memory," in which he illustrated the action of the brain in memory by analogy with the action of inanimate substances under certain stresses. A bar of iron under the stress of a slight weight, after bending, returned to its original position; under the stress of a heavier weight it acquired a "set," the "memory" of the strain to which it had been subjected. From this "set" it did not recover. The result, however, was different with an organised substance, such as a rod of wood, illustrated in this instance by a long slender whip-stock, which, though it took a set from a heavy strain, tended to recover from that set, at first comparatively fast, and then with diminishing speed until the normal position was at last recovered. The analogy with the action of the brain was, that the brain was only affected momentarily by slight impressions, but that stronger impressions left a "set" on it from which it only slowly recovered, the very stongest impressions leaving a permanent "set." Thus, if we looked out of a window at a new scene, and then turned away, the brain would retain for a time the main impressions—a mountain on the left, for instance, a wood in the middle distance, and so on; but the lighter impressions of smaller details it would almost at once lose; they did not overpass its limit of elasticity, and in regaining its normal state the brain was like other organised substances—it tended to forget, to lose the impression, quickly at first, then more and more slowly, till the impression was totally effaced. The phenomenon of active memory, the effort to recall an impression which had faded, was touched on at the close of the lecture, especially the familiar case of the memory-searching for a word which it cannot at once find, and which seems afterwards to emerge of itself from some recess of the brain. That the philosophy of this aspect of the subject was not further elucidated was probably due to the Institution clock marking the expiration of the alloted hour for the lecture. We may add, however, on our own account, that the analogy of structural memory with mechanical suggests the curious and rather startling idea that memory is the result of a diseased condition of the brain; and that the physically healthy savage, occupying his brain only on matters of immediate importance to him, would be untroubled by memories. This certainly seems the natural deduction from Dr. Mercier's thesis.

The New Baptist Church House, High Holborn.

THE foundation stone was laid a few days ago of the new Baptist Church House to be erected at a cost of about 34,000*l.*, after Mr. Arthur Keen's plans and designs, Mr. John Belcher, A.R.A., having acted, we understand, as consulting architect to the trustees. The buildings, which will be distinguished by a central clock tower, with belfry stage and lantern, comprise a council chamber, a library, visitors' and committee rooms, together with various offices for the Baptist Tract and Book Society, and cognate purposes, and the first floor will be occupied by the Baptist Union upon their removal from their Missionary Society's House in Furnival-street, Holborn. The site has a frontage of 80 ft. to Southampton-row (as widened), and one of 140 ft. to Eagle-street; a portion of the ground was given to the trustees in compensation for the demolition in February last of their old Baptist chapel in Kingsgate-street, of which the southern end has been taken by the London County Council for the metropolitan improvements now in progress at High Holborn and Southampton-row. The chapel in Kingsgate-street was built in 1855-6, after C. C. Searle's designs, to replace the former chapel in Eagle-street, founded in 1735.

Some Rebuilding in Fleet-street.

THE rebuilding, with an enlargement on the east side, of the offices of the Law Life Assurance Society, No. 187, Fleet-street, has now been completed by Messrs. Howard & Co., contractors, after plans and designs prepared by Mr. W. E. Clifton. The original offices were designed by John Shaw, the younger. The extension stands upon the site of the forecourt on the west side of the tower of the church of St. Dunstan-in-the West; it has been erected against the side of the tower, and is carried up as high as the top of the second stage of the tower. The western forecourt was sold for 4,500*l.* to the Insurance Society by the trustees under the Act of 10 Geo. IV., cap. 96., for rebuilding the church, and it has been proposed to devote the purchase money to the building of a rectory house against

the eastern side of the tower. In that event the whole character of John Shaw the elder's church will be entirely spoiled. Upon the south side of Fleet-street, immediately opposite, a large space has been cleared by the demolition of Nos. 23-8, for the erection of a block of offices and shops from the plans and designs of Messrs. N. G. Joseph, Son, & Smithem. The present opening affords a view from the north of the Temple church. Descending the street we obtain a better prospect of the church of St. Bride, as we look down the recently-widened St. Bride's-avenue, where the houses, built from John B. Papworth's designs after the fire in 1823, have been pulled down, their sites (in part) being taken for new premises, in concurrence with the scheme for the gradual setting back of the line of frontage on that side of the main thoroughfare.

The Hellenic Society.

PROFESSOR WALDSTEIN, on Thursday last week, gave an interesting lecture at the Hellenic Society under the title "A Discovery of Marbles related to the Pediments of the Parthenon." The marbles in question are not newly discovered; they have been for some years in a museum at Dresden, where no special value has been attached to them until Professor Waldstein noticed that they appeared to reproduce to some extent the line and attitude of the Ilissus and Theseus figures of the Parthenon, as if based on these as models. There are two statuettes, a male and a female figure, of which the former, the photograph of which was thrown on the screen, at once suggests the recollection of the Theseus figure, and some other examples were shown of statues which also showed certain derivations from this and the so-called Ilissus figure. Professor Waldstein's idea seems to have been that the Parthenon sculptures became to some extent a kind of model or school, and other works were produced which resembled them, not as copies, but as showing the influence of the recollection of these figures on the work of other sculptors. This is quite possible—perhaps even probable; but is it not also possible that the Parthenon figures of river-gods and heroes themselves represented an accepted type, which Phidias followed out for what may be called ritual reasons, while imparting to them a special power derived from his own genius?

A Novel Electric Meter.

MR. HOLDEN described last week in a paper read to the Institution of Electrical Engineers a meter which he had invented to register electric energy. At first sight the meter appeared to be a very complicated one. It did not register continuously, the electrical mechanism only operated for a second in every minute. This was effected by means of clockwork, which closed a circuit once every minute. Hence a magnetic impulse was given to the spindle of the meter sufficient to make it register two complete turns exactly at full load. It started to register with a current less than the fi .eth of its maximum curren and th the impulse made the spindle turn only the twenty-fifth part of a complet revolution. The wonderful accuracy of this meter was obtained by means of an iron disc fitted on the spindle and rotating in the neighbourhood of a permanent magnet. Hitherto in most meters it has been customary to use a copper disc and to depend on the eddy currents induced in it for the "braking" effect. Mr. Holden's paper is a most scientific one, and whether his meter is the meter of the future or not, the theory which he has worked out is most instructive, and his paper, in our opinion, is a model of what a technical paper ought to be. Professor Ayrton suggested possible ways in which a consumer might attempt to get electric light for nothing by turning off his lights for the second when the meter was registering, but as Mr. Holden pointed out the chances were equally divided as to whether he would cheat himself or the company by this procedure. One curious point that Mr. Holden mentioned in his paper was that the reading of the meter was affected at light loads by its position relatively to the magnetic meridian. For example, if calibrated with the face pointing north and set up in the house with its face pointing south the error might be 4 per cent. in excess or defect. We had previously noticed this phenomenon in connexion with other meters.

The Telegraphone.

MR. GAVEY, the electrician to the Post Office, showed the Poulsen telegraphone in action to the Institution of Electrical Engineers last week. The telegraphone, which was considered the greatest electrical novelty shown at the Paris Exhibition last year, is a magnetic rival of the phonograph. In the phonograph the sounds are registered mechanically on a wax cylinder, in the telegraphone they are registered magnetically on a long strip of steel ribbon. The same ribbon can be used over and over again to record conversations. To wipe out the preceding conversation it is sufficient to pass a magnet along the steel tape. The tape is made to pass either by clockwork or by an electric motor close to a telephone diaphragm, and the induced magnetism forms a permanent record of its vibrations. On moving the ribbon in front of the diaphragm again, identically the same vibrations are produced. Mr. Gavey by means of loud-speaking telephones reproduced perfectly a Danish song which had been sung into a Poulsen telegraphone four weeks before at Copenhagen. This illustrated that the steel tape retains its magnetism and makes a permanent record. The tone of the instrument is far superior to that of the phonograph, and to us it appeared practically perfect. Whether it will ever come into general use is another matter, but if it does it will have completely solved the problem of a relay for long distance telephony.

The London and North-Western Railway.

THE rejection by the House of Commons last week, on the second reading, of the Railway Company's "Omnibus" Bill prevents the Company from proceeding, for the present, with their schemes for various works, embracing an improvement of Holyhead harbour, new docks at Garston, on the Mersey, the w. ing of their line in the Trent Valley, and other projects. They are carrying out extensive alterations in St. Pancras Parish for an improvement of their lines into the terminus at Euston-square. It is on account of their default to discharge their obligations in respect of re-housing persons dispossessed by them on the Stanhope-street, Granby-street, and Mornington-road area, that, as we read, the Home Office has preferred a claim of 16,000*l.* penalties under the Company's Act of 1898. The pulling down of house property in that quarter will ultimately extend to the villas and lodges with their pleasant gardens in Park Village East, along the Regent's Canal, Augustus-square, Mornington-road, and the immediate vicinity.

Mrs. Allingham's Exhibition.

THE gallery of the Society of Fine Arts again contains a special exhibition of Mrs. Allingham's beautiful watercolours—a collection entitled "The Seasons (Spring, Summer, and Autumn)," the result of two years' work. The subjects are of the same class as usual; rural English landscapes peopled with exquisitely-finished little figures, and the art displayed in them is as perfect as ever. There are a few studies of figures only, including two portraits of Carlyle, some children, and a lovely head entitled "A Country Lass" (37), the best of the works of this class; but for the most part the subjects present the usual programme; compositions chiefly of foreground and middle distance, consisting of cottages, foliage, and the little figures which give life to the scene without asserting themselves prominently. The variety in composition is so great that there is no feeling of monotony and the artist shows true judgment in keeping for the most part to the style of picture which she has made her own and in which she has achieved perfection. When she goes beyond it, as in the wider landscape entitled "Leith Hill from Haslemere" (56), there is just a suspicion of weakness—a too delicate treatment of a subject which requires more breadth and power of style to do it justice. But of the majority of the drawings we can only say that one seems as beautiful as another, and it is difficult to select any as specially attractive beyond their companions. The charm of composition is illustrated perhaps more especially in "On a Kentish Down" (5), "On a Blue-bell Hill" (7), "The Runaway" (10), and "On the North Downs in Early Spring" (23). In "The Cuckoo" (27) and "Into the Daisy Meadow" (66) we have the charm of extreme simplicity, little more picture material than a hedge and a gate and a single figure which gives the human interest to the scene. There are some flower-garden studies, too, which are delightful; one subject out of the artist's usual range is "A Yorkshire Moor" (39), which is perfectly successful, and a few in which the building is the principal interest—"In a Kentish Village" (33), "Old Kentish House" (45) with its vertical lines of half-timber work, and "Cottages at Godalming" (65). "On Ide Hill, Kent," is one with rather more extent of the subject than usual; the village green and cottages in the foreground, and an extended distance are treated with the greatest delicacy. The beauty and sentiment of rural England has no such interpreter in painting.

The Goup Gallery.

M. LEON LHERMITTE, the French painter, is better known in this country by his charcoal drawings, which were first exhibited by the Black and White Society in the seventies, and received an enthusiastic reception. Since then his reputation has long been secure as a painter of a high order, who has year by

year been one of the foremost exhibitors at the Salon. An exhibition of his work in London, although limited in extent, gives an opportunity for studying some of this artist's remarkable work. The collection at the Goupil Gallery consists chiefly of pastels; there are a few pictures, and a number of charcoal drawings. The charcoal drawings are instructive for the refined handling of light and shade. "A Pastoral Visit" is one of the best; a scene inside a large Gothic church, a kneeling crowd receiving the benediction of their bishop; the drawing of a "Market Place" is also remarkable for the crowd. "At Mass" is a fine architectural interior. Pastels are often an excuse for carelessness and slipshod work. This artist's are worthy of study for the remarkable effects obtained in this medium. He is very fond of long shadows and shady foregrounds with a sunny distance beyond, such, for instance, as "Gathering up the Hay," "Sunset in Autumn," "Le Pont de St. Père." A beautiful little picture of a different character is that entitled "Early Morning Fishing." The oil paintings exhibited are few and of less interest than the pastels.

The Dowdeswell Gallery.

AT the Dowdeswell Gallery is an exhibition of paintings in oils by Vereker Monteith Hamilton, consisting principally of sunrises and sunsets in Brittany and Kashmir. A collection of similar subjects from such widely different parts of the world is an interesting one. Kashmir—well known as it may be to soldiers and travellers, who have described its wonderful scenery with the pen—is not so well known on canvas, especially some of the out-of-the-way country here illustrated. A remarkable picture is that of "Sniping the Rearguard," in which two ragged Afghans, secure in the mountain heights with night closing down, are taking a long shot at the invisible enemy (presumably ourselves) beyond the ravine. A companion picture to this is "The Shot at Daybreak," a sporting picture of a more dramatic character than the first. The smaller pictures have on the whole the best work in them, such, for instance, as "Rose and Gold on the Jhelum" and the "Yellow Tree at Gunderbul," rare pieces of colour finely handled. "Après le Coucher du Soleil" is a clever little picture; and "La Grande Route" is a characteristic French highway with a fine avenue of poplars yellow with the glow of the setting sun.

The Modern Gallery.

THE Society of Miniature Painters are holding their sixth annual exhibition. The exhibition is held in a room to itself at the Modern Gallery, free from other pictures that so often render it impossible to study miniatures to the best advantage. A miniature, like a sonnet, may contain a whole world of beauty and imagination; it is, besides, one of the most charming forms of portraiture. It is an art of perfection, and for this reason, perhaps, attracts only a limited number of artists. These provide the real interest of such an exhibition as the present, while the large number of exhibits are of the dull and worthless coloured-photograph type. Mlle. Cécile de Chaussé has a work notable for size and for its vigorous treatment—it is one of the largest ivories we have seen—entitled "Judith." It is not quite our idea of the appearance of that remarkable character, who we imagine as rather an inspired patriot than as a haughty amazon; but the work is a telling one. Interesting, too, is a work entitled "Vivien," very much spoilt by the exuberance of the frame. For good technique and for values, Miss Winifred Hope Thomson's portrait of the Lady Elizabeth Manners may be considered the best thing in the exhibition. "Pieces of Eight," by Mr. John Hassall, is a fine piece of work, and would, we think, have satisfied R. L. Stevenson himself. Noticeable also is a portrait entitled "Madge," very direct and simple in treatment; and in the same case, by a different hand, is a well-drawn portrait called "Olivia." For variety, we suppose, is shown an extraordinary little picture entitled "The Yellow Book," by Mr. Dudley Hardy, full of cleverness and careless decadence.

PICTURES AT THE ROYAL ACADEMY.

THIS may be described as an interesting but not a remarkable Academy. There is no picture that imposes itself on one as the great work of the year; for M. Benjamin-Constant's portrait of the late Queen owes its ostensible pre-eminence to position and subject. At the same time we must say that we can neither understand nor sympathise with the tone of detraction applied to this picture by critics and visitors. It is not a great work, but it is on the whole a very fine one, a dignified and expressive portrait of a great sovereign. The mistake in it seems to lie in the over-accentuation of decorative details which should have been kept subordinate to the figure; it is not so much a portrait of Queen Victoria as an interior in the midst of which she is seated; the figure does not detach itself sufficiently from the surroundings. But that is not a reason for speaking of it as a poor work, which it certainly is not.

Of the pictures which deal with the human form and with human interest (apart from portraits) the first important one which we meet with, Mr. Dicksee's "Yseult" (52), suffers under the same disproportion as M. Benjamin-Constant's portrait just referred to; the accessories kill the figure; it is a mass of gold throne and crimson drapery, powerfully and brilliantly painted, but the head is tame and devoid of character and power, and might belong to any name of a mythical queen or princess one chose to put to it. The most important works of the figure class are perhaps Sir L. Alma Tadema's "Under the Roof of Blue Ionian Weather" (220), Mr. Abbey's "Crusaders Sighting Jerusalem" (163), and Mr. John Collier's "In the Venusberg" (794). In point of scale and finish the latter might be called the most important work of the year; in a decorative sense it is superb, but it is entirely destitute of the romantic spirit which such a subject demands. Mr. Collier is an admirable painter but no poet; and but for the nudity of the figures this might pass for a stage scene. Venus, her lower limbs enveloped in a rich drapery, sits under an alcove in a carved marble screen which extends across the picture; a knight in armour kneels before, and a nude damsel stands beside her in an attitude of beckoning to some one, her beautifully designed figure relieved against the marble background. As a decorative picture it is of a high order, but its interest goes no further than that; there is none of the glamour about it which we associate with the idea of the Venusberg. Mr. Abbey's "Crusaders" is a work of much more serious aim; it is an upright in which the main lines of the composition are carried up in a very effective manner obliquely across the canvas, culminating in the flag which the standing figure holds up. There are only three principal figures, the one on the right kneeling; there is a fine general impression of triumph and earnestness of purpose conveyed in the group, but the countenances, taken separately, are somewhat deficient in definite expression. In background a portion of a crowd of figures is seen struggling up the hill, dragging with them what appears to be a catapult or some such mediæval engine of war. A fine work, but certainly not equal to the best we have had from its author. Sir L. Alma-Tadema does not aim at any meaning or story in his works; they are "simple beauty and naught else," which we are told on high authority is "about the best thing God invents," and in this respect he has seldom surpassed "Opus ccclxiii." (so it is inscribed), which occupies a centre position on the south wall of the long gallery, instead this artist's customary position near the doorway. The scene is occupied largely by the semicircular marble steps of a small theatre, with a sculptured altar and balustrade on the right—more marble even than usual; on these recline or stand various figures in delicately harmonised draperies; over the boundary wall of the semicircle is seen the distant deep blue sea; as a bit of classic beauty the whole is perfect. The President's "Helena and Hermia" (169) faces it on the opposite wall, "like two artificial gods," as the quotation from the "Midsummer Night's Dream" has it; one is tempted to make a pun and suggest "too artificial" as the appropriate reading; they are two very hard and mechanical young women. Mr. da Costa's large picture above it of "Serena Captive" among the forest robbers ("Faërie Queene") is bold and effective in colour, but if Serena wore all the "rich array" they are robbing her of she must have found her apparel a heavy drag upon her. Mr. Waterhouse's "Nymphs Finding the Head of Orpheus" (231) deserves appreciation as a beautiful piece of colour and design, though suggesting that the head of Orpheus floating in the water, and to which the nymphs seem to pay no attention, has been added as an afterthought for the sake of a title to the picture. Beyond these the long gallery displays nothing of importance in the way of ideal figure subjects.

Gallery IV. contains two large and bold attempts at pictorial allegory, Mr. Stock's "Pain bringing Wings to a Soul" (251), and Mr. Mulock's "Dying Day" (255), the latter represented by a large powerful semi-nude figure embedded in a mass of foliage and reddened one may suppose by the setting sun. Mr. Stock's group is of the nature of a Blake design on a large scale, and does not quite escape a suspicion of the ludicrous; the idea intended is perhaps a little too complicated for expression in painting; but we feel every sympathy with artists who are thus endeavouring to use the figure in an abstract and poetic sense. Mr. Sims's large picture between these, "Spreading their Wings" (254) does not explain itself very well; it seems to represent a party of people who have landed from a yacht and are flirting in a deserted churchyard; it is a kind of work one would have expected to find in the Salon rather than in the Academy; there is in fact a very French feeling about it, and the figure of the girl walking on the bank and relieved against the sky reminds one rather of Fragonard, but the picture has not point or meaning enough to justify its scale. Mr. Shannon's small picture "The Flower Girl" (274) is a real work of art, a vision of colour and light. Mr. Seymour Lucas has a clever picture (300) of Wolsey, in the garden of Hampton Court, mocked by three courtiers after his fatal interview with the King—it is evidently suggested by Act III., Scene 2 of Henry VIII., though this did not take place at Hampton Court. Miss Dicksee's picture of Laurence as a little boy, taking the portrait of a lady passenger who stopped at his father's inn, is a pretty and natural work of its class. Two pictures of curious originality and novelty claim mention. One is Mr. Lybaert's "The Evening of Life" (89) a very mediæval-looking painting of an aged *religieuse* with pinched and furrowed face, clad in a crude green mantle; a piece of elaborate embroidery stretched across forms a background, and is painted with astonishing realism; it is an affected form of art, but undoubtedly very clever, and we shall probably hear more of its author. The other is Mrs. Hunter's little picture of "Joy and the Labourer" (497); "Joy" being personified by a girl seated on the wall and singing to the labourer; it illustrates a passage from one of Miss Ingelow's poems. This also is not beautiful; but it is original and sincere.

Mr. Stanhope Forbes's "The 22nd of January, 1901," a cottage interior group gathered over the paper containing the news of the Queen's death (320), is his most interesting picture, not however by any means equal to various former works of somewhat the same class. "Good Bye—Off to Skibbereen" (495), a larger picture by the same artist, is a harbour scene

which does not interest us very much. Mr. Boughton's "Dreamland" (335), where a girl lies asleep in a very faintly coloured landscape, looks at first rather weak and washed out, but seen from a greater distance, across the room, it falls together into the pretty half-visionary effect which was evidently intended. After many commonplaces we find in Mr. A. Goodwin's "The Phantom Ship" (438) a work of real power; the actual ship is in the foreground, with the crew gazing at the "phantom" which passes in the middle distance, all the wind in her sails, and with an indefinable supernatural something about her which is very telling. In connexion with this subject may be mentioned Mr. P. W. Gibbs's clever picture of "The Ancient Mariner" (822) standing against the mast in his heat-baked ship with the bodies of his former companions strewn about, the dead albatross lying between his feet with supernaturally cynical expression in its head; able work, showing a vivid imagination. Of other works of the class we are now speaking of may be mentioned Mr. C. M. Q. Orchardson's "Memories" (520), an expressive figure of a girl playing the piano; Mr. Dendy Sadler's "Marriage by Registrar" (570), the nature of which every one will be able to figure to himself; and Mr. F. D. Millet's "An Accusation of Witchcraft" (857). Mr. Draper's "Tristram and Iseult" on board the ship (561) is an important work in intent, but the figures are totally short in dignity and are not worthy of the subject; nor has Mr. Chevallier Tayler made much of "The Origin of the Order of the Garter" (586), a hard painting of a subject out of his usual walk, and which he has not rendered interesting.

Portraits are well represented this year, and one of the very best, both as to likeness and artistic character, is Sir L. Alma-Tadema's portrait of Professor Aitchison (211) painted for the Institute of Architects. The Professor is characteristically represented with a book in one hand and a finger of the other hand raised as if enforcing an argument—perhaps a point as to the authority of Vitruvius. Another architect portrait is an exceedingly good likeness of Mr. T. G. Jackson, seated before a table covered with plans; by Mr. Hugh G. Riviere. Among the leading works in portraiture of the year is Mr. Sargent's of the two Misses Wertheimer (178), effectively contrasted in a dark crimson and a white satin dress respectively, and painted with the artist's highest power of broad and effective execution. Mr. Dicksee's "Duchess of Buckingham and Chandos" (122), like his "Yseult," is too much like a painting of a rich costume to which the face is entirely subordinate—what we call a portrait *de luxe*. Mr. Shannon's portrait of Mrs. Walter Fenwick (498) is remarkable for the bold treatment of the composition in flowing lines. Mr. Orchardson in his portrait of a gentleman seated under a tree with a gun (377) has shown his usual power of getting harmonious colours out an ordinary man's costume—shooting-dress in this case. One of the most characteristic and energetic portraits of the year is Mr. Sargent's half-length of Mr. C. S. Loch. In several portraits of children Mr. Ralph Peacock has shown uniform and conspicuous success in combining character with a fine and rich effect of colour.

War pictures are rather numerous but not remarkable, unless we except Mr. Furse's fine equestrian portrait of Sir Charles Nairne (222), which however is not in an active sense a battle scene, and Miss Kemp-Welch's "In Sight" (417), in which this lady has turned her faculty for painting horses to illustrating "Lord Dundonald's dash upon Ladysmith." Among the pictures in which figures are combined with landscape Mr. Clausen is, as usual, very successful, especially in "Sons of the Soil" (378), and Mr. La Thangue in "Gathering Plums" (308). Mr. John R. Reid has a fine coast scene in the first room "Sons of the Sea" (45) in which the human element consists in a row of little boys of the fishing population seated on the jetty; the picture has that clear open-air effect which this artist always succeeds in obtaining. Mr. Tuke's youths amuse themselves with a boat in "Summer Evening" (396), but this time they are clothed; as a matter of pictorial effect we prefer them nude. "Idlers" (411), by Mr. Dudley Hardy, is a curious but truly artistic work the subject consisting of a set of figures in Turkish costume seated on the ground in combination with a fine and very broadly-painted bit of landscape which, however, shows no sign of being the natural abode of Turks; it might be an English scene; but this is a fine little picture. Nor should we omit to mention Mr. Orchardson's charming little idyll, so original in colour and conception, entitled "In the Gloaming" (126).

The finest landscapes of the year are the sea-pieces, if one may put it in an Irish kind of way. Mr. Somerscales has two pictures which repeat his usual materials—a dark sea and one or two craft on: probably it is because he rather repeats himself that the Academy have taken to sending his pictures up aloft, as a hint that something more is expected of him. Mr. Hemy has an admirable work in the second room, "The Home Wind" (85), with a fishing smack running before it in fine style (Mr. Hemy can make a boat go through the water better than most men), but his most important picture is "Birds of Prey" in the fifth room (383), the title being derived from the figures of some wreckers on a rocky shore against which beats a sea driven by a strong gale; a very fine wild scene. But this again, to our thinking, is outdone by its companion by Mr. Wyllie in the same room, a Bay of Biscay sea suggested by Mr. Kipling's spirited poem which describes "how we threshed the *Bolivar* out across the bay"; the funnel and the mast are seen in the background "lurching through the spray." This is no conventional sea; hills of water come along with foam on their backs; it looks like a study from reality, and is perhaps the most powerful thing Mr. Wyllie has done. The same artist has a fine picture of the naval funeral procession of the late Queen (272).

There are a good many pleasing landscapes; some very good ones; no great one. Mr. Waterlow seems to be the landscape-painter now who best understands composition and unity in landscape painting. One may appreciate this by comparing his small picture "The Old Sandpit (919) with Mr. Murray's "Lush Meadows of the Test" (912) which hangs near to it. The latter is the larger and more elaborate work, but it is only a scene—Mr. Waterlow's is a picture. In his larger works, such as "Sheltered Pastures" (49) and "Hoghton Mill" (147) we see the same fine quality of composition, though neither of these are quite equal to his pine-forest by the sea of last year. But this is really landscape art, and not mere transcription of nature. Mr. Arnesby Brown's "Morning" is a fine work. Mr. Adrian Stokes, another genuine landscape artist, has chosen only scenery this year, his sole contribution being a view of Trafalgar Square, which is not hung in a very favourable light. Mr. A. Goodwin's "Sinbad the Sailor in the Harbour of Salahat" (784) may also be counted as a city landscape, in this case not trammelled by hard facts. The "Arabian Nights" has furnished him with matter for another landscape, under the title "Ali Baba and the Forty Thieves" (53), which at first sight is rather startling in colour and effect; it is an attempt to represent the glitter of everything under an intensely hot sun; the sprays of foliage look as if cut out in steel; the effect seems exaggerated, but there may be the intention of giving an unreal and dreamlike effect. A perfect little work is Mr. Mark Fisher's "Summer Afternoon" (289); the treatment of the water is beautiful, it seems actually to ripple, and we quite lose the feeling of paint. Of Mr. H. W. B. Davis's works we like best the small one, "Evening" (127), in the second room; "The Nearest Way Home" (162) is rather a repetition of former effects. So, in another way, is Mr. Graham's "Collecting the Flock" (164), a fine and powerful landscape, if we had not seen so many like it before. Mr. Mostyn's large landscape "Stepping-stones" (171), which hangs near the ceiling in the large room, though rather crude in tone, has a fine breadth and breeziness about it which seems to give promise of further work from its author. Mr. R. W. Allan's "After the Boats Came In" (256) is worth a note in respect of the fine way in which the wash of the sea on the coast outside the harbour is conveyed. Mr. MacWhirter has painted two views of Edinburgh, the New Town and the Old Town (333, 341); Mr. J. H. Reid's "Ferryden" (431) is a fine coast landscape; Mr. East's best work is "A Gleam Before the Storm" (486); Mr. North exhibits a fine picture of "Earth's Children of the Quarry" (562) representing masses of trees which have overgrown the declivities of a huge deserted quarry; Mr. John Brett, who unfortunately has contributed no large work, has some beautiful coast scenes in the "small" gallery, No. IX., especially "Cataclew Point" (687), and in the same room is a beautiful little landscape by Mr. Clausen "The Spreading Tree" (652), and another by Mr. La Thangue "December in Provençe" (660). Mr. Corbet's long narrow picture of "Val d'Arno—Evening" (863) not striking at first sight, is a work that grows upon one, as an illustration of evening effect over an extended Italian plain.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS:

ANNUAL GENERAL MEETING.

THE annual general meeting of this Institute was held on Monday evening at No. 9, Conduit-street, Regent-street, W., the President, Mr. Wm. Emerson, in the chair.

The minutes of the last meeting having been taken as read, the Report of the Council for the official year 1900-1901 was submitted. The Report stated that his Majesty has graciously consented to continue as King the patronage which he has extended to the Institute as Prince of Wales since the year 1863, and it is also his Majesty's pleasure to continue her late Majesty's generous grant of an annual Royal Gold Medal to the nominee of the Royal Institute. The non-award of the Royal Gold Medal for this year has been unavoidable, and though the Council regret a break in an institution that has been continuous for fifty-three years, yet they feel that, in future years, the gap in the list of Gold Medallists opposite the year 1901 will in itself be a mute and pathetic record of the irreparable loss of the Royal and gracious donor.

Since the publication of the last annual Report the Council have held twenty meetings, of which the Council elected in June last have held sixteen. There have also been meetings of the following Committees of Council:—Finance, Professional Questions, Annual Dinner, Conditions of Contract, Paris Exhibition, Professional Advertisement, New Institute Premises, Special Congress, Architectural Museum, Heating and Ventilating Engineers. Meetings of the following Institute Committees have also been held:—The four Standing Committees, Board of Examiners, Statutory Board of Examiners, Competitions, Prizes and Studentships, Professional Status, Ancient Lights (joint with Surveyors' Institution) Local By-law, General Congress.

The following tabular statement shows the present subscribing membership of the Institute, compared with that of the corresponding period last year:—

Year.	Fellows.	Associates.	Hon. Associates.	Total.
1900	620	1,013	45	1,678
1901	621	1,028	46	1,695

During the official year since the last annual general meeting twenty-nine Fellows have been elected, forty-six Associates, three Hon. Associates, and one Hon. Fellow. Two Hon. Corr. Members have been elected: J. Antoine Bouvard (Paris) and J. G. Pedro d'Avila (Lisbon).

The Council must attribute the smallness of the increase in membership in the class of Fellows to the more than usually heavy losses by death, by resignation, by transference to the class of retired Fellows, and by other removals from the list. There have been only three special elections to the fellowship by the Council under the new proviso to By-law 9, as compared with eleven last year and twelve the year before. On the other hand, the ordinary elections to the fellowship by the general body have been twenty-seven, as against twenty-one, fourteen, and eight respectively in the three preceding years.

The losses by death have been as follows:—Fellows: Charles Barry, Henry Cowell Boyes, John Burnet, John Butler, Francis Chambers, Henry Currey, Charles Henry Driver, William Charles Evans-Vaughan, Joseph Goddard, Horace Gundry, Edward Joseph Hansom, Thomas Harris, William Hepper, Newton Edward Jennings, Thomas Meakin Lockwood, William Henry Powell, John Murray Robertson, Lloyd Tayler, James Buckley Wilson, William Young. Associates: John William Blakey, Frederick Boreham, Henry Greenslade Wade. Retired Fellows: Henry Astley Darbishire, William Milford Teulon, John James Thomson. Hon. Corr. Members: Giuseppe Poggi, Antoine Henri Revoil, Jules Jacques van Ysendyck.

The usual progressive examinations were held in June and November, 1900, and the

Council have to report a steady increase in the number of candidates for each of the examinations. The Preliminary and Intermediate were held in London, Birmingham, Bristol, Cardiff, Manchester, Newcastle, Nottingham, and York, and the very cordial thanks of the Council are again due to the hon. secretaries and examination committees of the various allied societies for their ready and valuable assistance. The Final and "Special" examinations were held in London only. The total number of candidates examined during the year was 603, as against 548 in 1900. The number of probationers of the Institute now stands at 1,507, and of students at 368.

The Council again regret to say that the Arthur Cates prizes for the best testimonies of study (supplemented by certain specified sheets of drawings) submitted by students for admission to the final examination have not been awarded this year, no student who had passed the examination having fulfilled the conditions. The Ashpitel Prize has been awarded to Mr. Shirley Harrison, who passed the Final Examination in November, and extra prizes to Messrs. C. E. Varndell and Heaton Comyn. The "Special" Examination will be held this June in Sydney and Montreal. The Council desire to tender to the Board of Examiners their very warm thanks for the arduous task they have performed with such devotion and energy. Statutory Examinations were held in October and April last, when Certificates of Competency were granted to Messrs. Richard Dominic Hansom, Herbert Alfred Legg, James Edwin Webb, Sidney Joseph Halse, and Frank Sizer Capon.

The collection of paintings of the Royal Institute has been enriched by an admirable portrait of Professor George Aitchison, R.A., Past President, by Sir Lawrence Alma-Tadema, R.A. As a mark of their appreciation both of the constant and kindly services Sir Lawrence has rendered to the Institute for the twenty-four years of his membership as an Hon. Associate, and of the great eminence to which he has risen in his art, the Council took the opportunity of his painting this portrait to ask him to allow them to propose to the general body his election as an Hon. Fellow. Sir Lawrence was duly elected at the general meeting on February 18.

The Council have the pleasure to record the fact that the President, Mr. William Emerson, is a member of the advisory sub-committee of the general committee on the question of the National Memorial to her late Majesty. The President was also a member of the Art Committee of the Royal Commission for the Paris Exhibition, 1900.

The Council have been invited by the authorities of the Glasgow International Exhibition, 1901, to contribute to the Fine Art Section an exhibit from the collections of the Royal Institute, a bay in one of the galleries being placed at their disposal. The Council have complied with the request, and have sent the portraits of Professor Cockerell, Sir Gilbert Scott, and Mr. F. C. Penrose; marble busts of Inigo Jones, Sir Christopher Wren, Sir Charles Barry, and George Edmund Street; and a large number of drawings. The Council have acceded to the request of the Glasgow Institute that the Royal Institute of British Architects' Annual Dinner shall be held this year in Glasgow. It will take place on Thursday, October 3. An interesting programme has been drawn up for the visit, and the Corporation of Glasgow have kindly arranged to entertain the Royal Institute at a reception on Friday evening, October 4. The Council most earnestly hope that as many members as possible will attend, so as to ensure the success of the gathering.

The Council have had long negotiation with the London County Council with reference to the Holborn-to-Strand improvement scheme. With a view to securing proper architectural treatment for the crescent site, the Council were asked by the London County Council to co-operate in a scheme whereby eight architects, four to be nominated by each body, should submit designs, on certain conditions, each architect receiving an honorarium of 150*l*. A deputation of the Council waited on the Improvements Committee of the London County Council and protested against the proposed conditions. They suggested that there should be a competition among the eight architects, and that three should be chosen to carry out specified blocks, working together, however, as a consultatory committee on the whole scheme. The interview resulted in a few modifications in the conditions as to the details of drawings required and an increase in the honorarium offered to 250*l*. The Council were given to understand that there could be no guarantee that any of the eight architects should execute all or part of his design, and the invitation to co-operate was renewed on the slightly modified basis. Desirous of aiding the London County Council in their efforts to secure architectural treatment for the new street, the Council accepted the invitation under strong protest, and nominated four architects. Their names were Messrs. Reginald Blomfield, T. E. Collcutt, Ernest George, and R. Norman Shaw. Two of them, Messrs. Collcutt and Shaw, declined the nomination. The Council were requested to nominate two others in their place. In view of the London County Council's disregard of their protest accompanying the original nomination, the Council considered that they had gone as far as was consonant with the dignity of the Institute, and the profession which it represents, to meet the wishes of the London County Council, and formally declined to make further nominations.

Another matter to which the Council have given their attention is the alteration of the steps of St. Martin's Church. The London County Council were asked by the St. Martin's Vestry (now merged in the Council of the City of Westminster) to contribute towards the cost of the proposed alterations, which consisted in doing away with the broad platform in the middle of the flight and moving up the lower steps, thereby widening the pavement. The London County Council sought the advice of the Council of the Institute. Acting on the Report of the Art Committee, the Council protested against any proposal to touch the steps, both for artistic reasons and on the ground that the traffic was not so great as to necessitate any widening of the pavement. They urged, however, should the need for widening be found imperative, and consequently the abolition of the landing on the west side, that at all events the landing on the south side should be retained for the sake of architectural proportion. The London County Council adopted the Council's view, and refused the St. Martin's Vestry and the City of Westminster any financial assistance. In reply to a protest from the Council, the Town Clerk of Westminster replied that the work, having been already begun, must be proceeded with.

The London County Council also submitted for the opinion of the Council their draft by-laws under the Metropolitan Management Acts as to the deposit of plans with reference to pipes, drains, and other means of connecting with sewers. The main suggestion of the Council was that in lieu of elaborate duplicate plans and sections, which it was proposed that any one about to construct or reconstruct drains, &c., should deposit with the Sanitary Authority, it would be sufficient if one carefully-prepared block-plan were sent.

The Council, having been invited by the Bridge House Estates Committee to offer their suggestions on the proposed plans for the widening of London Bridge, referred the matter to the Art Committee, and adopted their Report. While deprecating any interference at all with the structure, they suggested, in case of necessity, an alternative scheme whereby the face of the parapet should be restricted to the line of the existing piers instead of overhanging them. The latest information received from the Corporation is that consideration of the scheme has been referred to a Sub-Committee of the Bridge House Estates Committee.

Adopting the Report of the Art Committee, the Council have addressed a protest to the Ecclesiastical Commissioners and the Lords of the Privy Council against the Union of Benefices Bill as drafted when introduced before Parliament last year. They urged that this Bill to extend the Union of Benefices Bill, 1880, to the whole of England and Wales should contain provisions whereby precious architectural monuments should be safeguarded against the destruction that has been permissible and practised in London under the provisions of the existing Act.

The Council adopted the Report of the Science Committee on the new regulations proposed by the London water companies, and sent in a protest, together with criticisms of the proposals, to the Local Government Board, by whom they were invited to send representatives to the inquiry held at the Guildhall, Westminster. Before final arrangements could be made for receiving the evidence of these representatives, the water companies withdrew their proposals and the inquiry terminated. The thanks of the Council are especially due to Mr. H. D. Searles-Wood for the time and trouble he devoted to the matter on behalf of the Institute.

The Council, adopting the suggestion of the Science Committee, sent out in January to the Corporation of the City of London, the London County Council, and all the new Metropolitan Borough Councils a circular letter with reference to the administration of the various Acts of Parliament in relation to the construction, &c., of drains and sanitary appliances and the structural removal of nuisances. They suggested that the question of detection of nuisances should remain in the department of the medical officer to the authority, and that matters relating to the construction, &c., be placed in the department of the surveyor to the authority.

The Council have also adopted the Report of the Science Committee with regard to a scheme suggested by the Plumbers' Company for the hall-marking of plumbers' work, and they have arranged with the Plumbers' Company for a conference to be held between the Company, the Royal Institute, and the water authorities, with a view to settle the best kinds of materials and forms of fittings used in plumbers' work, and to provide a basis for regulations on the subject.

The changes in By-laws 25, 29, and 30 were approved by the Privy Council on May 15, 1900. The approaching elections will be conducted, therefore, under the new regulations. The total number of the Council will be thirty-eight; there will be four Associate members; any Associate will be eligible for election; and the asterisks against the names of members of the existing Council and Standing Committees will be omitted.

The Council regret that their negotiations with the Institute of Builders, extending over a space of two years, have come to a fruitless conclusion. After much effort, suggestions for a revised form of contract were agreed upon by representatives of the two Councils. The arbitration clause was found, however, to be so unacceptable to the general body of members that no resolution was moved from the chair at the general meeting. The form was discussed, and the Chairman, on behalf of the Council, promised a revision of the arbitration clause before presenting it again to the Institute. The Council submitted to the Institute of Builders a revised arbitration clause in which "Clause 16" (Materials) was inserted among the clauses exempt from the operation of the arbitration clause. The Council of the Institute of Builders accepted this proposal on the condition of certain changes being made in Clause 16 itself, which practically rendered its inclusion among the exempted clauses nugatory. A deadlock occurred, and the Council reluctantly declined further negotiation on the subject with the Institute of Builders.

In accordance with the resolution of the general meeting held on April 9 last year a Joint Committee of the Institute and the Surveyors' Institution have had many meetings to consider alterations in the law of ancient lights. This Committee—which received the most valuable assistance from Mr. J. Fletcher Moulton, K.C., M.P., and Mr. G. Mallows Freeman, K.C.—issued a Report to the Councils of the two bodies. The Committee has been further authorised to draft a public Bill on the lines of their Report, and to submit it for consideration to the two Councils. The Bill is now in the hands of a Parliamentary draughtsman.

The Institute's publication, "Suggestions for the Conduct of Architectural Competitions," has been reissued as amended at the general meeting on January 7.

The Competitions Committee have caused stamped and addressed postcards to be sent to the hon. secretaries of all allied societies, with a printed form at the back, to be filled up by them with details of any proposed competition in their districts of which they may hear. On receipt of one of these, the Secretary has instructions to write at once to the promoters, urging that the competition be conducted on the lines of the Institute "Suggestions," a copy of which is enclosed.

The Council have renewed the representations made in 1889 to the Local Government Board concerning the Administration of Building By-laws in non-Metropolitan Districts. A deputation was received by the Parliamentary

Secretary, Mr. Grant Lawson, at the Local Government Board, on March 12, when a draft set of By-laws for the use of Rural District Councils, drawn up by the Local Government Board, was submitted for the opinion of the Institute. The Council have forwarded to the Local Government Board the suggestions of the By-laws Committee with regard to this draft.

The Council, having learned that the University of London were about to proceed to the appointment of a Board of Studies for Fine Art (including architecture), took measures to lay before the authorities the desirability of the Royal Institute being specially represented on the Board. The Council are gratified to report that the choice of the Senate has fallen upon Mr. Arthur Cates, who has further been elected by his colleagues as Chairman of the Board.

The Council have reappointed Mr. Thomas W. Cutler as the representative of the Institute on the Sanitary Inspectors' Examination Board.

At the Congress of the Royal Institute of Public Health, to be held at Eastbourne in July, Mr. Herbert Spurrell has consented to represent the Institute. Messrs. Alexander Graham and Edwin T. Hall will represent the Institute at the British Congress on Tuberculosis, to be held in London this year, also in July.

At the instance of Mr. Killingworth Hedges, M.Inst.C.E., and following a suggestion made by him in his paper on "The Protection of Public Buildings from Lightning," read before the Institute on April 23, 1900, the Council have aided in the formation of a "Lightning Research Committee," whose object is to tabulate information as to the destruction caused by lightning. Expert observations, exact measurements, photographs, plans, &c., will be welcomed by the Committee. Mr. John Slater and Mr. H. H. Statham represent the Council on the Committee. The other members up to the present are Major-General E. R. Festing, C.B., F.R.S., Messrs. J. Gavey, M.Inst.C.E., W. P. Goulding, F.S.I., Dr. Oliver Lodge, F.R.S., W. N. Shaw, F.R.S., A. R. Stenning, F.S.I., Arthur Vernon, F.S.I., Killingworth Hedges, M.Inst.C.E. The Council have voted a sum of 25*l.* per annum for three years towards the expenses of the Committee. Other societies are also lending financial aid to the scheme. Mr. John Slater is chairman, and Mr. G. Northover is secretary.

The Council recommend to the attention of members the Architectural Museum, Tufton-street, Westminster, which is somewhat in need of funds for purposes of repairs, maintenance of the 4,000 casts of examples of Gothic work, and the purchase, if possible, of casts of Classic and Renaissance examples. They feel that the support of the profession at large is deserved by a most valuable institution, whose foundation and maintenance have been the devoted work of a few men. The Council have decided to make the Museum an annual grant of twenty guineas, on the condition of the Council being adequately represented on the Committee of the Museum.

The question of architects' names appearing on advertisement boards has come before the Council, and they have issued a resolution which has been printed several times in the *Journal* and *Supplement*, and in the current *Kalendar*, to the effect that the signing of an architect's name on his building is not derogatory to the profession, but that "it is undesirable for architects to place their names on boards and hoardings in front of buildings during course of construction for purposes of self-advertisement." The Council earnestly hope that members will co-operate with them in making this resolution as effective as possible.

The Council take this opportunity of drawing attention to the needs of the Architects' Benevolent Society, and express the hope that the names of more members of the Institute will appear in the list of subscribers.

The Council are much gratified in being able to draw attention to the satisfactory financial condition of the Institute. Early this year the sum of 1,050*l.* was invested in Queensland Government Three per Cent. stock, thus bringing the total amount of the invested capital of the Institute up to 10,000*l.* A statement of income and expenditure, and balance-sheet for the year ending December 31, 1900, and an estimate of the income and expenditure of the present year are appended.

Reports of the various committees were also submitted. The Report having been adopted, the election took place of scrutineers for the annual election of the Council and standing committees.

The following gentlemen were then elected as Fellows: Messrs. Hippolyte J. Blanc, R.S.A., F.S.A.Scot., Edinburgh; C. Fitzroy Doll, of London; and E. H. Sedding, Plymouth; as Associate: Mr. R. Douglas Wells, B.A., London.

Mr. Lacy W. Ridge then moved the following resolution:—

"That in the opinion of this meeting it is not desirable that By-law 26 be repeatedly suspended. The Royal Institute looks to the Council to put forward each year a nomination for the Presidency in accordance with the constitution of the Institute as laid down in the by-laws."

This was withdrawn after some discussion, and the meeting terminated.

MAGAZINES AND REVIEWS.

THE *Art Journal* includes an article by Mr. Lewis F. Day on "Modern Stencilling" with illustrations of the work of one or two stencil designers who have endeavoured to extend the scope of the art by applying it to portraits, repeat figure friezes, &c. This is done in a very clever way, but it does not convince us, and we prefer to see stencil reserved for mere pattern. Designing for stencil is, however, no doubt good practice in the art of conventional design, or reducing natural foliage, as well as representations of symbolical objects, to decorative form. A good article is contributed by Mr. A. A. Bone on "The Frieze and its Origin." The writer does not throw any new light on the origin of the frieze, but he has a good word to say in regard to its sculptural treatment. "A well-planned frieze," he observes, "has much in common with a march in music, of which rhythm, proportionate determination of phrases, and continuous sustentation of force are the characteristics"; so the frieze must be designed with the same attention to symmetry of disposition as would be necessary among a body of men marching to music, who could not so march if irregularly disposed. This is a suggestion that will bear working out.

The *Magazine of Art* contains an article on "Modern Steamship Decoration," which we know has been carried to great elaboration of late, and often in excellent taste. We must say however, that we do not approve of tiles as steamship decoration. The fact that tile decoration *can* be successfully applied in an ocean-going steamer may no doubt be taken as a strong practical proof of her stiffness and solidity of build, but it seems out of place; one is accustomed to think of a ship as subject to constant strain in every direction, and tiles seem too rigid a material to harmonise with our idea of a ship, wood and fibrous plaster (which latter is no doubt largely used) seem more appropriate. An article on "The Newly-discovered Frescoes at Boscoreale" gives information and illustrations in reference to the most interesting find in Roman domestic art since the unearthing of Pompeii.

The *Studio* (April 15) contains an article, written and illustrated by Mr. E. Borough Johnson, on the subject "How to Use a Lead Pencil;" a practical subject on which many persons who handle lead pencils but do not know how to use them have much to learn. The advice given seems to be excellent, only we cannot agree that what the writer calls "the searching-out lines" in drawing from the figure should be left, and not rubbed out, "as they will give interest and spirit to the drawing," the right outline when found, being merely strengthened. This is a piece of cant in modern art-practice; we observe that some young architects, also, who send us sketches of detail, seem to consider that there is a kind of merit in leaving visible the incorrect lines by which they first made a bad try in curve or scroll. We call that simply slovenly workmanship. And then, too, the question might be put, ought there to be searching-out lines at all, and is not the finest practice to study the line so well before you draw it that you do it correctly without trial lines? As far as architecture is concerned, we know that sketching in ink is most valuable practice in this way, compelling the sketcher to take the whole proportions and understand the meaning of all the lines before he begins drawing them. However, the pencil is a pleasanter medium both in actual working and in final effect, and we are glad to see a good paper on the subject.

In the *Artist* is an article by Mr. Wentworth Huyshe on the lately recovered Greek statues which have been fished from the depths of the sea. The article, however, seems to be a summary of information and opinions rather than original: the illustrations give it, however, considerable interest. An article on "Art in Picture Frames," by Mr. Aymer Vallance, is far too short for the subject, on which there is in reality a great deal to be said.

The *Architectural Review* (Boston), No. 3 of Vol. VIII., contains a short article by Mr. Lewis F. Day on "Lettering in Ornament," which is to be continued, and a long one, with a good many illustrations, on "Doorways of the Bristol Renaissance," by Mr. J. W. Dow. What is "the Bristol Renaissance"? The inquiry introduces us to the fact that there are five towns named Bristol besides our own time-honoured city—one in Nova Scotia; one in Quebec; one in Nevada, U.S.; one in New Hampshire, U.S.; and one in Rhode Island, U.S.; which last is the locality of the chapter on architecture called by the rather large title of the Bristol Renaissance. This is described as "a unique local development entirely disconnected in American architectural genealogy." The doorways figured are mostly exceedingly what would be found in English eighteenth century houses, and are interesting enough, but the title is certainly too large for the subject. The illustrations include a fine geometrical drawing of the tower at the Buffalo Exhibition (Mr. J. G. Howard, architect); a fine erection of its class, both in general design and detail.

The *Edinburgh Review* includes an article on "Woodcuts and the Illustration of Books" apropos of the exhibition at South Kensington, but which does not throw much new light on the subject.

The *Quarterly* has an article on "The Housing Question," partly historical. As far as it deals with the present state of things, the tendency of the article is to recommend business methods of working. The author speaks strongly, among other things, against the unreasonable demands which are made on railway companies to run workmen's trains at a financial loss, especially on the part of the London County Council. "No sound economic development can take place by this method of extorting service." An article on "The Game of Billiards" will probably interest a good many of our readers; and the number contains also what is perhaps the best and most interesting article on the late Sovereign which has appeared in any magazine.

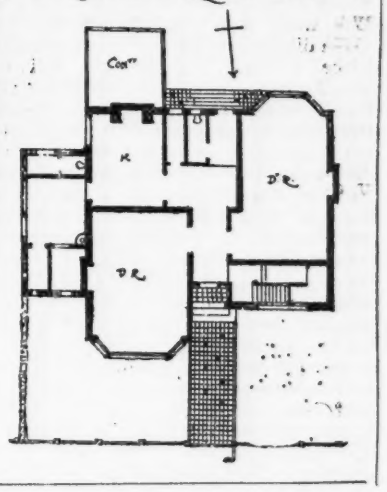
The *Monthly Review* contains an article by Professor Waldstein on the recently recovered Greek sculptures. He directs attention especially to the "bronze Hermes," and to the marble sculpture which has been called the "crouching warrior." The importance of these works Professor Waldstein considers to be partly due to the fact that they are separate sculptures, made for their own sake as sculpture, and not as decorations to a building. The article should be read by those interested in Greek art.

Scribner, under "The Field of Art," gives an interesting description, with illustrations, of the work of the Sèvres manufactory at the recent Paris Exhibition, considered as an example of French architectural decoration.

Harper contains an article by M. Benjamin-Constant on "My Portraits" which it is needless to say is of considerable interest. More especially are the following remarks on his portrait of Queen Victoria, now at the Academy of interest at the present moment; they explain to us what the author was aiming at:—

"Recalling my visit to the House of Lords one beautiful day in autumn, when the yellowish rays of the westering sun shone through the glass windows, I seemed to see one of those interiors of a golden obscurity in which Rembrandt so loved to place his figures; and I beheld as in a vision .... the Sovereign, seated on the throne of England, motionless, her gaze deep in retrospection, almost hieratic—the idol of her subjects. I saw this Queen, in gorgeous robes covered with jewels, and bathed in the rays of the setting sun from head to foot. With this sublime apparition in my mind, I wished to express, as it were, an entire reign. . . . I returned, then, to London for my preparatory work in sketches with sunshine effects, and the weather conditions were favourable, too, although it was in March, towards the close of the wintry season. I saw once more the throne in the same clare-obscure (light and shade), in the same golden

"FAIRMEDE"
NEW SOUTHGATE
ERECTED FOR
ALLAN HEDDERLY ESQ
ARTHUR STRATTON
A.R.I.B.A. ARCHITECT.



vapour, so sumptuously poetic, which enraptured my vision on my original visit to the House of Lords.

The studies finished, I went back to Paris, realising thoroughly what I had to do, but not knowing positively if I should succeed. I started my work then, having before me a small, very exact likeness of the Queen's face. This, be it understood, was not the copy in enamel of a nose, of a mouth, that I was going to execute, but the portrait of the Queen of England, the Empress of India, seated a little in the background, in a semi-obscurity traversed diagonally by two or three rays of the declining sun, like bars of gold, which attached themselves to the carved corners of the Royal stall, or lighted up the red tapestry hangings. In short, I proposed to myself to express, so to speak, a synthesis of resemblance; a resemblance, moreover, rather moral than physical; almost a historical vision."

The *Century* contains two descriptive articles on ancient cities, one on "The Deserted Capital of Rajputana," the other on the ruins and remains of Prieue, described as "a recovered city of Alexander the Great." Unfortunately they both appear to be the work of popular writers rather than learned archæologists. Some trouble, however, has been expended in illustrating them.

"Dunvegan Castle" is the subject of an illustrated article in the *Pall Mall Magazine*.

The *Church Builder* (quarterly) contains No. 7 of a series of articles by Mr. J. T. Micklethwaite on "Church furniture and arrangement," this one dealing with "The Basilican plan." The tendency of the article is to the effect that there is no basilican plan, and that if there is we can find it without going out of the range of mediæval churches, since at St. Peter's, Mancroft (Norwich), St. Margaret's, Lynn, and St. Margaret's, Westminster, and a hundred other places, we have the unbroken nave and aisles from end to end, just as in the early Greek and Roman churches. There are other qualities besides plan, however, in the type of church called Basilican, a title which defines what is meant well enough, whether it be regarded as historically correct or not. The protest in the article is that of a mediævalist church architect, in fact.

Feilden's Magazine contains articles on "Motor Cabs in Paris" and on "Electrical Ties," the latter a continuation of the essay by Mr. Brew commenced in a previous number.

The *Essex Review* (quarterly) contains a long article, with a good many illustrations, on "Some Interesting Essex Brasses."

In *Knowledge* the interesting investigation as to the height and action of ocean waves, by Mr. Vaughan Cornish, is continued, accompanied by a diagram showing the relation between what are recognised as waves are the larger and longer undulations on the surface, which occur on a vast scale in the Pacific especially, the normal "waves" being comparatively smaller undulations on the surface of the greater and slower ones.

We have received also the *Revue Générale* and the *Gentleman's Magazine*.

FAIRMEDE, NEW SOUTHGATE.

THE illustration shows a small country house erected in the Bowes-road, New Southgate. The disposition of the plan was dictated by the nature of the site and the points of the compass. It is very simply treated throughout; the walling is of local brick with slightly darker-toned quoins, &c.; the roofs are covered with green Westmorland slates, and the paintwork generally is white. The contract was carried out by Messrs. Brown & Sweetland, of New Southgate, under the superintendence of the architect, Mr. Arthur Stratton, of London.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, Mr. A. M. Torrance, Chairman, presiding.

Loans.—On the recommendation of the Finance Committee it was agreed to lend the Battersea Borough Council 2,460*l.* for the erection of a sawmill, the Stepney Borough Council 5,160*l.* for street-lighting purposes, the Woolwich Borough Council 2,170*l.* for the erection of a library, and the Poplar Borough Council 640*l.* for the erection of a wall.

Improvements.—On the recommendation of the Improvements Committee it was agreed that the estimate of 10,000*l.* submitted by the Finance Committee be approved; and that, subject to the Council of the Metropolitan Borough of Wandsworth agreeing to contribute one-third of the net cost, and subject to the terms of an agreement to be prepared by the solicitor, the offer of Messrs. Holloway Brothers to surrender their leasehold interest in the part of the Magdalen College estate required for the widening of Garratt-lane, Wandsworth, to 54 ft. be accepted.

Theatres.—On the recommendation of the Theatres and Music Halls Committee the following applications were agreed to on certain conditions:—

London Exhibitions.—Model of a Boer farm, to consist of a cottage of five rooms, constructed of studding and plaster slabs (Mr. A. O. Collard).

London Exhibitions.—Addition to the south-east side of the Quadrant Restaurant (Mr. A. O. Collard).

Lyceum Theatre.—Certain structural alterations.

Tramways.—The Highways Committee reported as follows:—

"We have to report, for the information of the Council, that the Board of Trade has, by letter dated April 24, 1901, signified its approval, required by the London County Tramways (Electrical Power) Act, 1900, of the plans, submitted in accordance with the resolution passed by the Council on November 27 last, showing the rail and substructure proposed to be used in the reconstruction, for electrical traction, of the tramways between (*a*) Westminster Bridge and Upper Tooting-road, (*b*) Kennington Park-road (at its junction with Kennington-road) and the Blackfriars terminus, and (*c*) St. George's Circus and the terminus in Waterloo-road. The Board has also approved, provisionally, the proposed system of traction so far as the use of a pressure not exceeding 500 volts is concerned, such approval being subject, however, to any requirements which may be considered necessary on the inspection of the completed works. The Board has asked to be furnished with further details of a technical character with regard to the supply of energy at a pressure of 6,500 volts to the proposed sub-station at Balham; and we have given instructions for these further details to be prepared and submitted as soon as possible for the approval of the Board.

The Council will be able after June 29, 1901, to give notice to the South London Tramways Company of intention to purchase, under Section 43 of the Tramways Act, 1870, the tramways authorised by the South London Tramways (Extensions) Act, 1880. These tramways are about 4¾ miles in length, and are situated in York-road, North-street, St. John's Hill, Lavender Hill, Wandsworth-road, Falcon-road, Queen's-road, and Victoria-road. They constitute rather more than one-third of the company's system, various other parts of which will become purchasable in 1902 and 1903 respectively. The Council, it will be remembered, served a notice upon this company last year to purchase the portion of its undertaking which then came under the operation of the section above referred to."

Having transacted other business, the Council adjourned.

SANITARY INSPECTORS' ASSOCIATION.

SANITATION IN SOUTH AFRICA.

AT the monthly meeting of the Sanitary Inspectors' Association, held at the Carpenters' Hall, E.C., on Saturday evening, a paper was read prepared by Mr. J. S. Dunn, Sanitary Inspector to the Bulawayo Council, on "Sanitation in South Africa." Mr. W. H. Grigg, the Chairman of the Association, presided.

In the absence of Mr. Dunn the paper was read by Mr. O. C. Hills. In the course of the paper the author described South Africa as a country without sanitation. With regard to Cape Town, although it was making advances, it would be some time before it could be favourably compared with towns of similar population and importance at home. The roads and footpaths and gutters required much attention. The subsoil in places must be frightfully polluted from slop and kitchen water. Much slum property existed; rents were high even in these quarters, and conse-

quently overcrowding was prevalent. Passing on to discuss the condition of Bulawayo, he pointed out that that township was just over six years old, and stands where Lobengula's cornfields formerly flourished. Practically no attempt had been made to construct proper roads and footpaths, and he (the writer of the paper) left it to the imagination of those who had not visited the spot to picture the condition of things after a downpour of five or six days' duration. The population was now about 4,000, and the pail system was in vogue for the removal of night soil, the work being performed nightly, an advantage which no other South African town enjoyed to his knowledge. The work was carried out departmentally, clean disinfected buckets being provided about twice a week. The night soil was conveyed to the municipal depositing site, about three miles from town, and emptied into trenches, which were then prepared for tree planting. Rubbish, slop water, dead horses, &c., were also removed by the Council. At present the system in vogue for rubbish removal was not quite a happy one. They endeavoured to persuade occupiers to enter into monthly contracts with the Council, when their rubbish was removed periodically for a stated amount, but as this system was not compulsory, they could not always bring the public to see things from their point of view; consequently large and offensive accumulations were not an unknown fact. The removal of slop water was a burning question at Bulawayo, as it was in the majority of South African towns. Let them imagine a town with only surface drainage. Refuse water could not flow down the street gutters, removal by slop waggon was costly, and only compulsory in the event of a nuisance arising; consequently the usual way of disposing of the water was by scattering it over the stands. Thus the subsoil was being polluted wholesale, and the purity of the well waters endangered. There was a water supply, but owing to the fluctuating quantity of water available, its variable quality, and the high tariff charged, the demands on the company were not great. Moreover, as over 350 wells had been sunk in the township, frequently a costly undertaking, their use would not be abandoned for trifling reasons. It was regretable that more care was not exercised in selecting positions and in their construction, so as to guard against possible pollution.

Too frequently one found that every opportunity was offered for the entry of surface water and foreign matters at the mouth of the well, and that contamination by percolation from closets, dustbins, stables, washing water, &c., was easily accomplished. However, the Council realised that well water could not be regarded as a permanent supply, and the necessity of obtaining a wholesome and abundant one for the people was now receiving their earnest consideration. In the meantime all doubtful well waters would be carefully analysed. With the exception of typhoid fever they had been remarkably free from infectious disease. It was well they had, for an outbreak would find them unprepared. Notification was compulsory, but there the law as regarded infectious diseases practically ended.

Dealing with the slaughter site, he described it as unsatisfactory in the extreme, simply consisting of poles erected about a mile from the township. The blood soaked into the ground, the water supply was totally inadequate, carcasses were exposed to the weather; pigs, dogs, and Kaffirs acted as scavengers. The stench was unbearable. The Council had, however, after two years' deliberation, at last decided to erect municipal abattoirs. There were other steps being taken which would make Bulawayo a more pleasant place to live in. Some of the recently erected permanent buildings would be a credit to any European capital. Touching upon the condition of colonial villages, he regretted that the defects were very glaring. He concluded by expressing the opinion that had South Africa been in a better condition as regarded sanitation, probably the sickness and mortality among our troops in the present campaign would have been greatly lessened. He feared that with the present sanitation preventible disease would take a long time to stamp out.

Mr. Hills (City of London) said the facts given had come as a revelation to many of them. He certainly did not know that so many defects characterised sanitation in South Africa. Now that a large number of Englishmen were being appointed to posts better results would arise.

Mr. Young (Battersea) was surprised to hear of the condition of things in Cape Town, and trusted that before long the attention of the British public would be called to the matter.

Mr. E. Tidman, on the authority of a military officer, confirmed the statements as to the condition of Cape Town.

A vote of thanks was passed to Mr. Dunn for his paper, and to Mr. Hills for reading it.

APPLICATIONS UNDER THE 1894 LONDON BUILDING ACT.

AT the meeting of the London County Council on Tuesday the following applications were considered. Those applications to which consent has been given are granted on certain conditions. Names of applicants are given in brackets. Buildings are new erections unless otherwise stated:—

Lines of Frontage and Projections.

Wandsworth.†—The retention of a tool-shed in the garden at the rear of The Beeches, No. 21, Melrose-road, Wandsworth, abutting on Avenue-road (Dr. G. G. Sharp).—Consent.

Wandsworth.†—School buildings on the east side of Garratt-lane, Wandsworth, at the corner of Swaffield-road (Messrs. Lansdell & Harrison for the Guardians of the Wandsworth and Clapham Union).—Consent.

Hackney, North.—Houses, with shops on the ground floor, on the forecourt of No. 50, Green-lanes, Stoke Newington (Mr. J. Phœnix for Mr. F. W. Britton).—Consent.

Wandsworth.†—Thirteen one-story shops on the east side of Balham High-road, between No. 207 and Elmfield-road (Messrs. Dale & Gadsdon for Mr. J. Stone).—Consent.

Width of Way.

Deptford.—Gates and a boundary wall at the entrance to the chemical works, on the east side of Creek-street, Deptford (Messrs. F. C. Hills & Co.).—Consent.

Hoxton.—A two-story warehouse at the rear of No. 110, New North-road, Hoxton, at less than the prescribed distance from the centre of Salisbury-street (Mr. R. Matthews).—Consent.

Deviations from Certified Plans; and Projections.

Strand.†—Deviations from the plans certified by the District Surveyor, under Section 43 of the Act, so far as relates to the proposed rebuilding of No. 20, Cockspur-street, Charing Cross, with projecting oriel windows and turrets (Mr. W. Woodward for the International Sleeping Car and Express Trains Company).—Consent.

Deviations from Certified Plans.

Lambeth, North.—Deviations from the plans certified by the District Surveyor so far as relates to the proposed rebuilding of No. 242, Westminster Bridge-road, Lambeth, at the corner of York-road (Mr. F. Waghorn for the Camden Brewery Company).—Consent.

Lines of Frontage, Width of Way and Space at Rear.

Walworth.—That the application of Messrs. Spalding & Spalding for an extension of the period within which the erection of a building, to be used as a working men's club, on the east side of Walworth-road, Walworth, at the corner of York-street, was required to be commenced and completed, be granted.—Agreed.

The recommendations marked † are contrary to the views of the Local Authorities.

NEW WING, EYE AND EAR HOSPITAL, TUNBRIDGE WELLS.—A new wing has been added to this hospital; it was opened on the 30th ult. Mr. H. M. Caley was the hon. architect.

OPEN SPACES.—Walpole Park, at Ealing, has been purchased from Sir Spencer Walpole by the Ealing District Council for 40,000*l.*, and converted for purposes of a public recreation ground; the property, including the mansion and grounds of about thirty-one acres, was occupied by the late Right Hon. S. H. Walpole, Secretary of State, and the offer to the District Council was made in December, 1898, subject to the life-interest in the property of Miss Frederica Elizabeth Perceval (youngest daughter of Spencer Perceval), who died at a greatly advanced age in May last year.—The Hampstead Borough Council have appointed a special committee to consider and report upon the project of the School Board for London to acquire part of the site of the old mansion with its grounds, known as the Grange, at Kilburn, for the erection of a Board School; the Board's proposal has aroused considerable opposition in the locality, where it is desired to preserve the property as an open space.—The Corporation of the City of London have ratified a code of by-laws for the regulation and use of the garden space within Finsbury-circus, which they have taken over for the benefit of the public, in pursuance of an Act passed in that behalf last year.

ARCHÆOLOGICAL SOCIETIES.

ROYAL ARCHÆOLOGICAL INSTITUTE.—A general meeting of this Institute was held on the 1st inst., Mr. E. W. Brabrook, C.B., V.P., in the chair. Mr. E. Green, in the absence of the author, read a paper by Mr. A. R. Whiteway, M.A., on "The Pyrenean Neighbour, or the Vicinal System in the Western Pyrenees." Mr. Whiteway, long resident at Pau, having given attention to and mastered the difficult Bearnais tongue, has followed up his advantage by a close examination and study of the local archives, from which he has gathered many notes on local customs, and especially this vicinal system, hitherto a neglected and unwritten chapter in the history of social institutions.—Mr. H. Longden read a paper on "Cast-iron" and dealt principally with cast-iron fire-backs, examples and photographs of which were exhibited. One specimen shown bore the Royal Arms of James I., 1604; another of "Richard Lenard, founder at Bred Fournis, 1636," showed a portrait of Richard Lenard standing in the middle of the implements of his trade and of the products of his foundry; a Puritan back showed the sacrifice of Isaac, the Patriarch, Jacob blessing the sons of Joseph, Joseph being put into the pit, and Jacob being informed of the death of Joseph; another showed the Rose surmounted by the Crown, 1650; and a very fine one "Fairfax Counquiror, 1649," gave the general on horse-back finely modelled. A note was made of a fire-back belonging to Mr. Edmund James, where an earlier model of St. George and the Dragon was surmounted by the legend "Cursius" and "Nil Desperandum, 1650," and placed at the side of the figure. It was thought that this back had a Royalist signification in contrast to the Fairfax back. A rubbing of a grave slab of Anne Forster, 1591, was shown and a description of how the model was prepared for casting was given. A casting, lent by Mr. E. James, of the Baptism of our Lord, apparently of the sixteenth century, was also exhibited. It is not a fireback, but has evidently been fitted to other work. The Almighty and the Holy Spirit, each surrounded by a nimbus, are in the upper part of the panel, and St. John Baptist and our Lord are in the lower part. Mr. James Hilton exhibited a pair of German iron earings of very delicate casting, originally made to replace similar articles of gold and jewellery which were given up by the ladies of Germany at the time of the Napoleonic wars. In the discussion on this paper Mr. R. G. Rice gave many quotations from Sussex wills in which the names of ironfounders were mentioned, and references made to iron grave slabs, &c.

BRITISH ARCHÆOLOGICAL ASSOCIATION.—The annual general meeting was held on the 1st inst., Mr. C. H. Compton, J.P., in the chair. An interesting account of the exploration of a tumulus in Buckenham Fields, Norfolk, was contributed by Lord Amherst of Hackney, and read by the Rev. H. J. D. Astley. The tumulus is one of two large tumuli on Lord Amherst's property, situated about seven miles north of Brandon, and was opened by him in August last in the presence of a large party interested and experienced in such operations, including Prof. McKenny Hughes, Prof. Mahaffy, and others. The work proved somewhat heavier than had been anticipated owing to the tumulus having been thrown up on the brow of the slope so that it deepened on its lower side more than had been foreseen. It is often very difficult to find the exact centre of a sepulchral mound, as the additions, whether of earth or stones, would be originally larger on the side where it was most easy to procure material, and, in after ages, the crumbling down of the mound would be greater where it was helped by the slope of the ground. In this case the centre of the mound, as obtained by measurement from its inferred marginal outline, did not coincide with the highest point, nor did the position of the only interment met with agree with either. The mound was divided by the explorers into quadrants, separate parties undertaking each, so as to insure that nothing could be overlooked, and the whole face was dug clean down to the undisturbed sand and gravel. Notwithstanding the care exercised no secondary or contemporary marginal interment was found. In the north-west quadrant an old horseshoe without calkins was met with, raising the hope that Saxon remains might be near, and in the south-west quadrant some bones of domestic animals, suggesting

relics of the funeral feast, but nothing came of them. In the north-east quadrant, however, in the afternoon of the last day's work, a skeleton was uncovered lying in a posture which indicated a British interment. After Professor Hughes and others of the party had left a further interesting discovery was made, consisting of a circle of charred earth and ashes, some 6 in. in width, forming an almost complete ring round the skeleton at a distance of about 2 ft. from it. As the body did not occur in the centre nor at the bottom of the mound, but at a great depth near the centre, it seems quite possible that it may be a contemporary burial of secondary importance, and that the principal interment may still be concealed under the deepest part of the mound not yet explored.—Mr. T. Cato Worsfold gave an interesting description, based upon his own research and observations, of the Porta Nigra, or Great Gate of Trèves. After discussing the origin and foundation of the grand old town, whose rise to eminence gained for it from the poet Ausonius the title of "Rome beyond the Alps," Mr. Worsfold described the numerous and splendid relics of the Roman occupation which remain to the present time, and then explained the construction of the Porta Nigra and the theories put forward as to the date of its erection, which he himself assigns to the commencement of the fourth century, when it became necessary to erect defences against the rush of Rome's Teutonic foes. From this period the history of the Porta Nigra was traced onward through the Middle Ages until its final restoration in 1876. Mr. Blashill, the Rev. Evelyn White, Mr. Gould, Mr. S. W. Kershaw, and others took part in the discussion which followed the papers.

ARCHITECTURAL SOCIETIES.

ROYAL INSTITUTE OF ARCHITECTS OF IRELAND.—A general meeting of members was held at the rooms of the Institute, 20, Lincoln-place, Dublin, on the 2nd inst. The chair was taken by Mr. J. Rawson Carroll, F.R.I.B.A. The following resolution was proposed by Mr. J. J. O'Callaghan, seconded by Mr. F. Franklin, and carried unanimously:—"That the draft by-laws of the Ulster Society of Architects be approved of, and that the Council of this Institute be authorised to make the necessary alterations in the by-laws of the Institute to make them conform with those of the Ulster Society." The following candidates for membership were declared duly elected:—William A. Scott, London; Jerome O'Connell, Curragh Camp; Henry Seaver, Belfast; and Anthony Thomas Jackson, Belfast. The proceedings then terminated.

ENGINEERING SOCIETIES.

SOCIETY OF ENGINEERS.—At a meeting of the Society of Engineers, held at the Royal United Service Institution, Whitehall, on the 6th inst., Mr. Charles Mason, President, in the chair, a paper was read on "The Treatment of Low-grade Iron Ores for the Smelting Furnace" by Mr. Thomas B. Grierson, M.Inst.C.E. The author first alluded to the serious condition of the British iron trade owing to foreign competition, which condition the great American Steel Combine had served to accentuate. One of the difficulties against which Great Britain had to contend in its export trade was, he said, the foreign protective tariffs. The want of more advanced appliances and processes in British steelworks was given as one reason for our being unable to compete successfully with foreign producers, particularly Americans, who were more to be feared as trade rivals than other competitors. American steelmakers, as well as those of other countries, had been adopting new machinery and new methods, whilst we had been standing still. The author then pointed out that the remedy for this unsatisfactory condition of matters was for the British steelmaker to set his house in order, firstly, by adopting improved plant and methods of production, and, secondly, by utilising low-grade iron ores, of which there is an almost unlimited supply. Low-grade ores were mainly of two kinds, magnetic iron ores and magnetic iron sand. The low-grade ores would not pay to smelt in lumps, but required to be pulverised and concentrated. In that condition, however, they, as well as the iron sand, are unsuited for the blast furnace. It was, therefore, necessary to combine them with some cohesive material, and to make them into briquettes. This preparation had been effected by heat alone, but that method was only successful with ores containing silicates. Lime formed a good binding material, whilst concentrates had been variously mixed with tar, pitch, and bituminous coal, and pressed into briquettes and coked. The matter resolved itself into the mechanical reduction and concentration of the poor ore, the incorporation of the concentrates with a suitable coherent, and the conversion of the mass into briquettes. The author described Mr. Edison's process, respecting which there has recently been a considerable amount of discussion in the Press. This process consists in crushing the ores in a mill and in concentrating them. The concentrates are mixed with certain ingredients which are not publicly known, and the mass is then pressed into briquettes and baked. The briquettes were stated by the author to be of a porous nature, and unsuited to the requirements of the blast furnace. Mr. R. F. Strong had also invented a method of treating low-grade iron ores. The ore was first reduced to powder, and concentrated by any suitable appliances. The concentrates were mixed with binding materials in the proportion of 85 per cent. of concentrates, 5 per cent. of powdered quicklime, and 10 per cent. of pyroligneous tar. The mass was pressed into briquettes, which were immediately ready for use in the blast furnace, not requiring to be baked like Edison's. Strong's briquettes had been proved to be specially adapted by their density and compactness for the blast furnace. For countries where charcoal fuel is used, that ingredient is incorporated in the briquettes. The author recommended that blast furnaces should be erected at the low-grade iron ore deposits, and the pig-iron made there. The cost of transport to steel works would thus be that of the metallic products of the ore, the matrix being left behind in the form of slag.

BOOKS RECEIVED.

QUANTITIES. VOL. I. ROAD MAKING AND SEWER CONSTRUCTION. By J. Bartlett. (St. Bride's Press.)

BUILDING TRADES IN WARSAW.

REPORTING on the trade and agriculture in Poland and Lithuania for the year 1900, Mr. Murray, British Consul-General, writes under date April 3:—The financial crisis has had a very bad effect on the building trades throughout this district, and especially at Warsaw, where also the large number of houses built in the last two or three years has had a similar effect; 904 plans for new houses or for rebuilding were presented to the Government Architect for confirmation in 1898, and 846 plans in 1899, whilst in 1900 only 591 plans were submitted. Again, in 1898 the builders declared their intention of carrying out 542 of the buildings; in 1899, when the crisis began to be felt, the number dropped to 294, and in 1900 to 230. Taking the time required for the construction of a house at two years, this would mean that work was done on 800 houses in 1899, on 500 houses in 1900, and will be on 370 houses in 1901. On the other hand, the amount of the work done on public and block buildings increased in 1900 as much as that on private houses diminished. For instance, there were the Polytechnicum, which is to cost 300,000*l.*; the new building for the "Child Jesus" Hospital, also to cost 300,000*l.*; the "Rossia" Insurance building, to cost 110,000*l.*; the Hotel Bristol, the Fine Arts Exhibition, the Philharmonic Hall, the block of shops in the Dluga-street (60,000*l.*), the block of buildings being built in the Smolna, and others. In several of these constructions use is being made of materials which are new here; for instance, in the Hotel Bristol the ceilings are of mixed iron and cement on the Mattray system, in the Polytechnicum some are Mattray and others Klein, whilst in several other buildings they are on the Monier system. In almost all buildings use is still made of the unhealthy and heavy clay plaster instead of plaster of Paris. Lifts are beginning to be introduced, but unfortunately no control is exercised over their construction, so accidents are to be feared. An improvement that is becoming general is the arrangement of windows to open inwards, and this, it is to be hoped, will diminish the number of accidents to servants while cleaning them. Steam heating for the whole of a house is coming into vogue. It is usually carried out by means of a central installation with a low pressure of steam. Electric light has also been installed in several houses, but it is found necessary to have accumulators and also to find lodgers who wish it, which very few do at Warsaw on account of the expense. Although there is very little building of dwelling-houses likely to be done in Warsaw itself in 1901, a good many villas and houses are to be built in the suburbs, which become more and more popular, rent there being much lower, and the increased number of steam and other tram lines render communication easier. Several factories are to be built in the suburbs of Czysta and Wawer. The villas and dwelling-houses will be mostly at Czysta, Willanow, and along the lines of the steam tramways; 1900 was a bad year for all suppliers of materials for building, as they had arranged their output on an estimate in accordance with the amount of building done in 1897-98-99, so that there was a considerable over-production, especially of bricks. Many brickfields had to close altogether; others sold their stocks of bricks, which they had prepared at the beginning of the season, at any price they could get, the price per 1,000 falling from 2*l.* 5s. in 1899 to 1*l.* in 1900, which barely covered the cost. Glazed tiles for stoves were also in small demand, and two works closed altogether, after existing only three years. Cement works also did badly in 1900, and few of them paid any dividend. The demand was so much smaller than in previous years, that they had to diminish production and lower prices. The cement works, however, form a strong syndicate, which already had an arrangement with the German works that neither should export cement; strong in the knowledge of which they have now decided to raise prices 25 per cent. in 1901, as there will be no competition from abroad. The price of cement in 1900 was 6s. per cask wholesale and 8s. per single barrel. This price was only maintained thanks to a considerable demand in Russia. Had the works depended on local demand alone, they might just as well have closed. Lime did better than any other material used for building, and prices were maintained. The lowest prices paid were 1s. 2d. to 1s. 1½d. per cwt. for first quality and 1s. 1½d. to 1s. 0½d. per cwt. for second quality. The price of plaster of Paris was 2s. 4d. to 2s. 3d. per cwt. The manufacture of mineral colours has been carried on in the kingdom of Poland for about thirty-five years. The first factory established was one which still exists at Grodzisk, near Warsaw. There are also factories at Winnica, near Warsaw, and at Konski, Skarzysko, Radom, and Bendzin. The colours manufactured consist of various ochres, umbers, English reds, and various kinds of black (bistre). The washing process has only been introduced at one factory, all the others employing the dry process. The clay is dried burnt to the proper hue, ground by millstones and sifted through silk muslin. The various ochres employed are found in the country, the best qualities being found in the Koniecki district of the Government of Radom, and in the Bendzin district of the Government of Piotrokoff. Iron oxides (refuse of iron workings) are imported chiefly from the United Kingdom, "Cassel brown" and various kinds of bistre from Germany. The colour supply having increased until there was an over-production, there is now a great stagnation in the trade. No other kinds of colours except those mentioned are made in Poland.

ELECTRIC LIGHTING IN LEEDS.—The City Council of Leeds have made application to the Local Government Board for sanction to borrow 510,500*l.* for purposes of electric lighting, and this application formed the subject of a public inquiry held at the Municipal Buildings on the 18th ult., by Mr. H. H. Law, M.Inst.C.E., an inspector appointed by the Board. The Council's scheme includes the extension of the present works in Whitehall-road, the installation of engines and dynamos, the introduction of new plant, and the laying of mains in various parts of the city. The Town Clerk (Mr. W. J. Jeeves) gave the inspector a brief sketch of the history of the electric lighting undertaking, which was acquired by the Corporation in December, 1898, by purchase from the House-to-House Electricity Company. The number of units sold in the year ended December 31, 1893, was 130,000; in the year ended March 20, 1901, it had increased to 2,520,414, which was an increase of over 500,000, or more than 25 per cent. on the preceding year. The number of lamps in 1893 was 10,647; this year it was 132,293, an increase of 26,000 on last year. The gross revenue had gone up from 4,001*l.* in 1893, to 43,624*l.* in the year ended March 20 last, which latter amount showed an increase of 7,404*l.* on the revenue of the previous year. The working expenses had, of course, also increased, beginning with 2,706*l.* in 1893, and being this year 13,770*l.* The profit this year was 3,600*l.* greater than last year. They started at December 31, 1893, with a gross profit of 1,295*l.*, and this year it was 29,884*l.*, but naturally there was also an increase upon interest and sinking fund, that increase being altogether about 5,000*l.* Mr. Charles France (of Messrs. Milnes & France, Bradford), the architect for the new works in Whitehall-road, explained the scheme. The works are really an extension of the present buildings in Whitehall-road, and are being erected on adjoining land which the Corporation acquired by purchase from the company who formerly owned the electric supply works. The area of that land is 5,700 yards, practically the whole of which will be covered by buildings, within which there will be provided all the plant requisite to the growing demands of the undertaking.

Illustrations.

RAILWAY STATION, HOWRAH, CALCUTTA.

FOR some long time past the present terminus of the East Indian Railway has, owing to the growth of the line and its consequent increase of traffic, been found inadequate, and the advent of the Bengal and Nagpur Railway determined the directors to rebuild their station so that it should accommodate both railways.

Howrah is a suburb of Calcutta, across the Hooghly (about three-quarters of a mile broad at that part), connected with it by means of a swing bridge.

The new station, with its length along the riverside, is adjacent to the bridge and faces Calcutta. The disposition of the ground floor is shown on the plan; the first floor is devoted to the offices of the superintendant of traffic, telegraphs, &c., and the third floor contains the residences of the officials connected with the railways.

The station consists of two blocks connected on the first floor by means of a bridge of 47 ft. span, and the façade measures about 600 ft. in total length, with return wings 200 ft. odd in depth.

The main (Chandmaree) road from Calcutta over the bridge passes on the north side of the station, and the tower—with a clock—is placed at the angle to inform the traveller, as he drives to catch his train, of the amount of time available for him. The third-class waiting halls are open the full (40 ft.) height. The discrepancy between the perspective and the plan is due to the fact that the former was made almost at the outset, whilst the plan represents the building as it is to be executed.

HALSEY RICARDO.

NORTH LONDON CREMATORIUM.

THIS building is to occupy a site near the Finchley-road, where some acres of hillside are to be judiciously planted by Mr. William Robinson. This ground, or garden, will not be dotted like a cemetery with tombstones, as by the scheme a cloister will form the "columbaria" for urns, and will bear the various monuments and memorials on its walls.

The building will be entered from a forecourt, with the chapel on one side, and the superintendent's cottage, office, &c., on the other side.

The chapel has a carriage porch. It has two retiring or waiting rooms, with separate exits for mourning parties who may be using the building simultaneously.

Four furnaces are provided, as these burn themselves out quickly and want frequent renewing. The furnace flue forms a centre to the belfry, from which, however, no smoke should issue, there being a second small furnace in the throat of the flue for the consumption of smoke or gas.

This brick building is broadly and simply treated in the round-arched style of Lombardy—the low-pitched roofs being of Italian tiles.

The small domed building in the architects' drawing shows a family mausoleum, or columbaria. It is thought that separate bays of the cloister will be secured by families, and their monuments of stone, marble, or bronze will have the benefit of shelter.

The architects are Messrs. Ernest George & Yeates, and the drawing is now in the Royal Academy Exhibition. It is the only drawing they exhibit this year.

THE REBUILDING OF THE ROYAL INFIRMARY, GLASGOW.

THE competition for the rebuilding of the Glasgow Royal Infirmary was a limited one, ten architects or firms of architects being invited to compete. Seven of these were Scotch practitioners, and three were from London. Dr. Rowand Anderson was the assessor. The scheme was one of great interest, involving, as it did, the pulling down entirely of the present infirmary, and erecting upon the site a thoroughly up-to-date building in arrangement and appointments. The accommodation required for the reconstructed buildings was 650 beds, divided as follows—viz., 225 on the medical side, 300 on the surgical, and 100 for special diseases. These were to be distributed into five medical services of forty-five beds each = 225; six surgical services of fifty beds = 300; and about 100 beds for diseases of women, throat and nose, skin, venereal, burn, isolation, and emergency cases. The site, a very fine one, situate close to Glasgow Cathedral, was very restricted in its extent, necessitating the adoption by all competitors of six stories of wards generally throughout. The author of the design we illustrate this week endeavoured to avoid the parallel arrangement of pavilions, the area of the site not permitting of sufficient distances between the six-storied pavilions; hence the nature of the general arrangement of the scheme. Each ward suite has its zone of aëration, the administration of the whole establishment practically being concentrated in the central longitudinal block. It being desired to utilise the southern portion of the establishment in the commemoration of the Queen's Diamond Jubilee, due effect was given by the projecting circular ward, with its twin towers and colonnade upon the ground floor. A fresh departure in the new hospital is the provision of some seven or eight operating-theatres, each visiting surgeon having his own separate theatre, out-patients' room, test-room, laboratory, &c. In a similar manner separate lecture-theatres have been provided for five visiting physicians. Each service throughout had suitable apartments for the house surgeon or physician, as the case may be—in each case closely adjoining the respective services. The author provided in the basement a special arrangement of medicinal baths, derived from the best German examples; whilst attention was paid to the now necessary electrical department and a gymnasium for orthopædic cases. Liberal accommodation was provided as required for dining and billiard rooms for the resident doctors; mess and sitting room accommodation for the nurses and the male and female servants. An important provision comprised the working and store rooms of the following departments — linen-rooms, dressmaking, mattresses, and the Dorcas. The general kitchen and its accessories were placed in what in the front is a basement story, but which at the back stands clear, the tradesmen's entrance being through an archway under the easternmost sanitary towers of the male surgical wards suite.

A committee-room, superintendent's and matron's suites of offices, journal-room, and a chapel, were provided in the central administrative block. The present laundry was in this scheme simply extended, with new boilers, incinerator, and disinfector.

The ear, throat, and nose, emergency, and isolation wards are of two stories only, above the ground floor. The exterior design has been kept somewhat severe in character, and its style and architectural proportions are in contrast, so as not to suffer by the juxtaposition of Scotland's chief cathedral.

The estimated and complete cost of this scheme was stated by its author, Mr. A. Hessell Tiltman, of London, to be 297,765*l*.

The Student's Column.

SANITARY FITTINGS AND PLUMBING.

18.—SLOP-SINKS AND URINALS.

SLOP-SINKS.—In small houses the water-closet generally serves also as slop-hopper, and is well adapted for the purpose of removing the slops, but affords no facilities for cleansing the bedroom utensils. There is also a danger of the enamel being damaged by the pails, and a further objection is the risk of splashing either on to the floor or the seat. As already pointed out, some siphonic closets are set in action by a pailful of slops, and are therefore unsatisfactory unless fitted with an automatic arrangement for starting the flushing cistern. Valve-closets are also unsuitable for the purpose, as the slops may overflow if the handle of the closet is not pulled at the moment of emptying. When the water-closet is intended to serve as a slop-hopper it ought to have a wide rim sloping inwards, or to be fitted with a "slop-top," in order to reduce the risk of splashing. If the closet is enclosed with woodwork, a square slop-top ought to be fixed to the basin under the hinged seat, as otherwise the floor is certain to become very foul.

A proper slop-hopper or sink is, however, a great convenience, and a suitable number must be provided in all large houses, and also in hotels, hospitals, asylums, boarding schools, and other important buildings where a large quantity of slops may be produced. The term "slop-hopper" is often applied to fittings for the simple removal of slops, and the term "slop-sink" to those provided with hot and cold water in addition to the flushing apparatus. The simple slop-hopper is in shape very similar to a wash-down pedestal closet; a movable grate of porcelain or brass (the latter being the better material) is often fitted in to prevent brushes and cloths being carried into the waste-pipe and drain, and the apparatus is all the better if the sides and back are raised to prevent splashing. The material may be enamelled cast iron, or some kind of glazed pottery. A wood rim is sometimes fixed along the front to prevent the enamel being chipped by pails.

The slop-hopper shown in fig. 1 is of cast iron, and may be painted, vitreous-enamelled, or white porcelain-enamelled. Plain painting cannot be recommended. The hopper is of the ordinary short-hopper water-closet type, but with a square top and raised back and sides. A flushing rim is provided with a nozzle for connexion to the flush-pipe of a cistern or to a simple supply-pipe. The trap may be of S or P shape. Similar hoppers are made of enamelled fireclay. This form of hopper is, however, objectionable in several respects. The large exposed surface of the hopper renders cleansing more difficult, and the outlet of the S-trap is not above the floor. The pedestal slop-hopper (fig. 2) is of better design. The back part is raised to reduce the risk of splashing, the basin and trap are in one piece of enamelled fireclay, the outlet of the trap is above the floor and clear of the wall, and a hinged brass grate, A, is fitted in the hopper to form a stand for jugs and other utensils which are being washed or filled from the draw-off taps projecting from the wall above. In addition to these taps, a flushing cistern, having a capacity of 2 gallons or 3 gallons, is connected to the nozzle at B, and operated in the same manner as a water-closet flushing cistern. Fig. 3 shows a "bracket" or "projector" slop-hopper on the same general lines, but with the back part of the top inclined upwards towards the wall instead of the raised back and sides.

Adams's slop-sink (fig. 4) has a flat back, so that the pottery fits closely against the wall; the trap is of P-shape, with the outlet in the side of the pedestal. The hopper has a raised back and side, flushing rim, and hinged brass grating, and can be fitted with a bed-pan flushing nozzle for hospital use. At one side an enamelled draining slab is fixed to receive the washed utensils.

Many slop-hoppers are fixed without flushing rims and cisterns, but cannot be recommended. Urine is a very foul liquid, and slop-hoppers are as difficult to keep clean as water-closets, and ought therefore to be flushed in a similar manner. The joints at the outlets of the hoppers ought also to be designed on similar lines. Slate or marble skirtings are sometimes used instead of pottery, and may be supported on iron brackets or on a framework of wood, but the latter is not a suitable material.

In slop-sinks for hospitals provision must be made for washing bed-pans. The "Victorian" slop-sink (fig. 5) is a good example. The hopper and trap are in one piece of glazed ware. A brass grating, A, covered with impervious vulcanite, is hinged at B in such a manner that it can be swung upwards and held by a catch when not required. The grating is fitted with a rose and jet, C, for washing bed-pans, one of these being shown by dotted lines. Water is supplied to the rose and jet by means of two taps (for hot and cold water respectively), one of which is shown at D. Two other taps, E, supply water to the draw-off nozzle, F, which is swivel-jointed at G, so that it can be turned up out of the way. The sink is flushed from a cistern containing 2 gallons or 3 gallons, the down-pipe being shown at H; the flush can be started in the usual way, or by pressing a button. The nozzle for receiving the flush-pipe is vertical, thus facilitating the formation of the joint. The outlet of the sink is well above the floor and clear of the wall, and is flanged to receive the soil-pipe branch, which is of cast iron, glass-enamelled inside, with a socket for the trap-ventilation pipe.

A scalding, or washing-up, sink is often fixed at the side of the slop-sink, and forms a most useful adjunct. The example given in

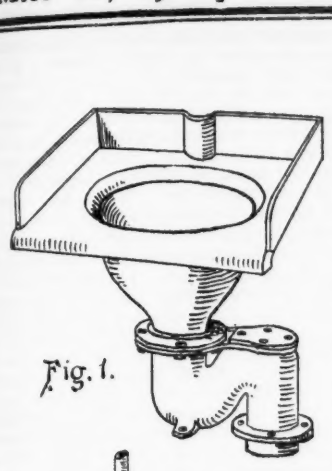


Fig. 1.

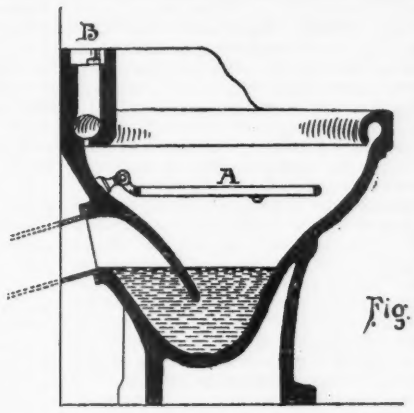


Fig. 2.

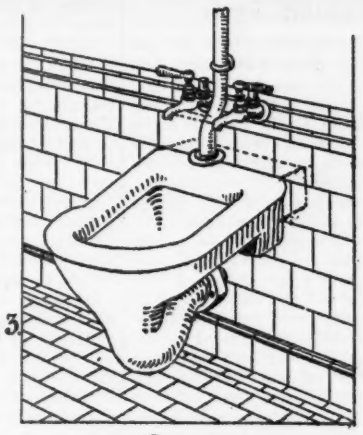


Fig. 3.

Fig. 11.

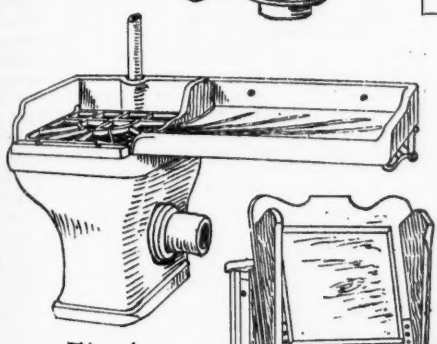


Fig. 4.

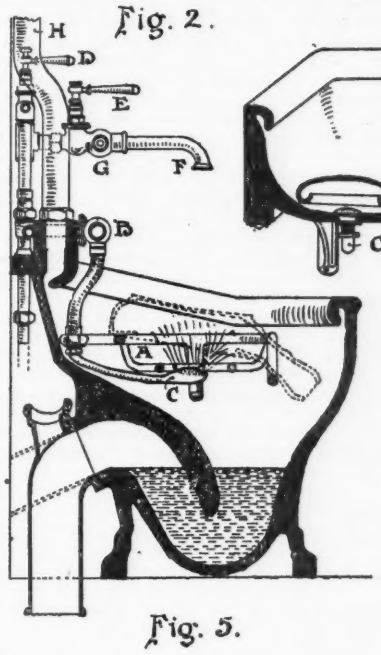


Fig. 5.

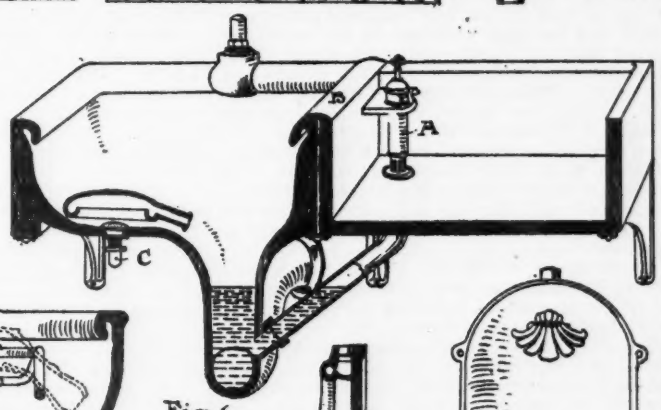


Fig. 6.

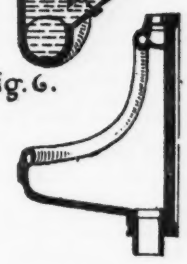


Fig 8.

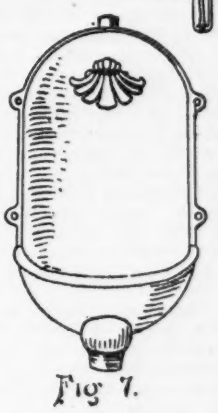


Fig 7.

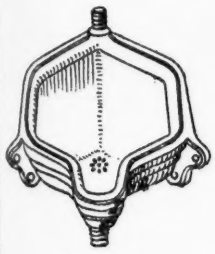


Fig. 9.

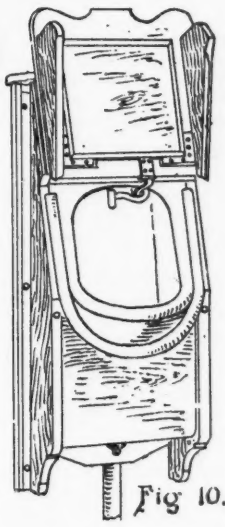


Fig 10.

Illustrations to Student's Column.

fig. 6 is known as the "Middlesex," and consists of a slop-sink with rectangular top, flushing-rim, and P-trap in one piece of enamelled fireclay, and a washing-up sink of similar material with standing waste, A, and overlap joint, B. A rose, C, can be fitted in the slop-sink for the purpose of washing bed-pans. The waste outlet of the washing-up sink is connected to the trap of the slop-hopper as shown. The sinks are supported on three enamelled cast-iron brackets, and a three-gallon cistern is provided for flushing the hopper, in addition to the hot and cold supply taps. An "Inserta" wood rim can be fixed along the front of each sink, after the manner illustrated in figs. 1 and 2, page 142, and has the advantage of protecting the enamel and of reducing the risk of breaking pottery utensils.

Urinals.—In ordinary houses special urinals are not required, as the water-closets serve the necessary purpose, provided that they are not enclosed with woodwork. A slop-top renders the closet more serviceable, but is not indispensable. In large houses (especially those containing billiard and smoke rooms), and in hotels, schools, railway stations, and other places where men congregate, urinals are, however, a necessity. They may be broadly divided into three classes—basins, troughs, and stalls. When basins and troughs are used the adjacent walls and floors ought to be of impervious materials, such as glazed tiles or glazed fireclay slabs, as a certain amount of splashing is almost unavoidable. All urinals ought to be provided with some kind of flushing apparatus, as they are extremely difficult to keep clean. Urine soon forms a coat of "fur" even on the smoothest surfaces, if these are not thoroughly flushed. The objectionable smell of urinals is greatly reduced, if not entirely removed, by keeping a piece of soda in each basin, trough, or stall.

Urinal basins may be of enamelled cast-iron or of glazed pottery, the latter being the better material. Fig. 7 shows a "cradle-back" basin of cast-iron with fan-spreader inlet. It is obvious that the flush cannot reach every part of the basin. As in water-closets and slop-sinks, a flushing rim is essential for the proper cleansing of the fitting; such a rim is shown in section in fig. 8, which represents a "flat-back" porcelain basin of good shape. Urinal basins may be "wide-fronted," as in fig. 7, or "lipped," as in fig. 9. The lipped urinal was introduced with the idea that the projecting lip would prevent urine dropping on to the floor, but it has not fulfilled the inventor's expectations; men are afraid of soiling their clothes if they stand sufficiently close for the lip to serve the purpose for which it was intended. The urinal shown in fig. 9 is designed for fixing in the angle of a room.

One of the difficulties connected with urinal basins is that the users seldom take the trouble to flush them. When the water companies have no regulations to the contrary, a stop-cock is often fixed in the supply-pipe immediately above the fitting, but comparatively few people take the trouble to turn it. In some places where the basins are largely used the water is kept constantly running throughout the day, but this is a practice to which water companies object. A supply of water during the usage of the fitting is, however, most important, as it cleanses the basin and at the same time dilutes the urine, and thus reduces the risk of "fur" being formed in the trap and waste-pipe. The apparatus shown in fig. 10 is a simple contrivance for effecting this object. The basin is fixed in a wooden framework and is covered, when not in use, by a lid hinged at the top. The raising of the lid opens the supply-valve, and the water continues to run until the valve is closed by shutting the lid. There is more woodwork around the fitting than is desirable, and the part below the basin might with advantage be omitted. Other methods of flushing urinals will be considered in the next chapter.

Folding urinals, generally of enamelled cast-iron, are sometimes fixed in offices and houses, but are apt to become very foul on account of the difficulty of flushing the surfaces of the containers into which the urine falls when the basins are lifted up.

The ordinary urinal basin has a grating in the bottom or back with a nozzle for connexion to the waste-pipe, and does not retain water. This cannot be regarded as an entirely satisfactory fitting, and basins are sometimes made to retain a quantity of water, either by forming a trap in one piece with the basin after the manner of a wash-down closet, or by raising the waste-pipe so as to form a trap behind the basin. A trapped basin was designed by Mr. Hellyer some years ago, but the outlet of the P trap was behind the basin, and the joint was therefore in the wall and difficult to inspect and repair. This objection has been removed in Tylor's urinal basin (fig. 11), but the seal of the trap is very small and the outlet appears to be very contracted, and therefore difficult to clean.

Urinal basins are generally fixed with brass screws, but sometimes lugs are provided at the back for fitting into slots in the wall-slab. As pottery often warps in the kiln, the backs of good fittings are ground to a level surface after burning, so that they will fit closely against the wall.

PRIMITIVE METHODIST CHURCH, TREDEGAR, SOUTH WALES.—The memorial-stones of a new chapel to be erected for the Primitive Methodist connexion at Tredegar were laid recently. The new chapel, which will be erected in Commercial-road, is to replace the old building in Mount-street. The new edifice, which is being erected by Mr. Rees Edwards, Tredegar, from plans prepared by Mr. S. Williams, Tredegar, will provide accommodation for between 600 and 700, and will cost about 1,700*l.*

DECORATION, ST. AUGUSTINE'S CHURCH, DUBLIN.—The decoration and carving of the Chapel of the Sacred Heart, St. Augustine's Church, Thomas-street, which has been in progress for some time past, has just been completed. The whole of the work has been carried out from the designs of Mr. George C. Asblin, R.H.A., Dublin, and the supervision of the work for him was done by Mr. Thomas A. Coleman.

GENERAL BUILDING NEWS.

CHURCH, HETTON-LE-HOLE, DURHAM.—A new church has been erected at Hetton-le-Hole. The building, which stands on the site of the old one, was designed by Mr. S. Piper, architect, of Newcastle-on-Tyne, and is of the Early English style, and will seat 800 people. One of its chief features is the large chancel, in which, on either side, there are three rows of carved oak stalls, the work of Mr. R. Hedley, of Newcastle-on-Tyne. On the right of the chancel, looking east, is a side chapel capable of accommodating from sixty to seventy people, in the east end of which is a stained-glass window in memory of the late Mr. Nicholas Wood, which occupied a position in the old church. The other stained-glass window, in memory of the first rector of Hetton (the Rev. J. S. Nichol), also removed from the old church, has been enlarged and placed in the south transept. The aisles of the church are narrow, with lofty arches and stone pillars. At the west end of the church there is a baptistry, formed by an arcade of three arches, with octagonal pillars, over which is a five-light window. In the north-west corner the choir vestry has been placed. The chancel is paved with black and white marble tiles, the work of Messrs. Borrodale Brothers, Sunderland. Within the sanctuary the tiling is entirely white. At the east end is the clergy vestry. The font, supplied by Messrs. Jones & Willis, London, is of Caen stone, with four marble columns. The pulpit is of carved oak, by Mr. R. Hedley, of Newcastle. All the aisles are laid with wood block in the herring-bone pattern. The builder was Mr. W. Sparrow.

CHURCH OF ST. PETER, NEWTON-IN-MAKERFIELD, LANCASHIRE. — A new tower and two porches have just been erected at the parish church of St. Peter, Newton-le-Willows. Mr. A. W. Smith, architect, of Manchester, prepared the plans for the tower and porches. In the base of the tower, which rises to an altitude of 77 ft., and also in the porches, the walls are covered with an oak dado, the doors being of the same kind of wood and carved, whilst a wood block floor has been introduced. In the belfry it is proposed to have a peal of bells, and provision is also made for fixing a clock on the outside. The contractor for the work is Mr. Peter Tickle, of St Helens.

REBUILDING OF ST. PAUL'S, THORNTON HEATH.—The memorial-stone of the first portion of the new church of St. Paul, Thornton Heath, was laid recently. About 6,500*l.* is to be spent on this work, which is being undertaken from the completed plans of the whole building drawn by Mr. R. Philip Day, the diocesan architect. The present instalment consists of the nave and aisles on the western side, from the extreme end of which the baptistry will be built out. The open timbered roof, tiled outside, will reach a height of 70 ft. Messrs. D. Stewart & Sons, of Wallington, are the builders.

NEW AISLE, ST. SAVIOUR'S CHURCH, DUBLIN.—On the 28th ult., the new aisle which has been erected in St. Saviour's Church, Dominick-street, was opened. The new aisle, the erection of which was commenced in September, 1899, consists of seven bays, making a total length of 124 ft. and width of 20 ft. inside on the south side of the church, and is built in Bath stone with clustered piers and moulded caps and bases, supporting segmental moulded arches which divide it from the old aisle. There are likewise moulded cross arches dividing each bay of the aisle. The groining is in pitch pine, with moulded ribs and carved bosses at the intersections. The floor is laid with pitch pine block-flooring and the passage at the sides with tiles. Each bay is lighted with a three-light tracery window, while the end window, where the altar stands, is filled with stained glass, which will be repeated in the side windows. The exterior of the aisle is built in ashlar limestone, with cut stone dressings, and finished with gables and foliated crosses. The new aisle is to be dedicated to St. Joseph, and it is the intention to erect an altar which will be in keeping with the other altars in the church. The communion railing is in Carrara marble, moulded and carved with columns in coloured marble. This work has been executed by Mr. Ryan, while the contract for the new aisle was carried out by Mr. James Donovan, from the designs and under the supervision of Mr. G. C. Ashlin, R.H.A., architects, Dublin.

CHURCH, OCKLYNGE, EASTBOURNE. — A new church is being built at Ocklynge from plans by Mr. G. E. S. Streatfeild.

BAPTIST CHURCH, BURY-ROAD, HASLINGDEN, LANCASHIRE.—This church was opened recently for public worship, and will accommodate on the ground floor 328, in the galleries 279, and in the choir twenty, total 627, or a mixed congregation of over 700 persons. There are four vestries attached, also a choir vestry adjoining the organ-chamber, which is in the form of a semi-circular apse, with the choir in front of organ and behind the pulpit. The seating is pitch pine, varnished; gallery fronts, pitch pine with carved oak panels, pulpit of oak with carved panels. The ceiling is of plaster, curved in centre with open timber trusses. The walls are of rock-faced stone, with ashlar stone dressings. The cost is over 4,000*l.* The architects are Messrs. George Baines and Reginald Palmer Baines, London. The schools adjoining were erected previously from plans by the same architects.

NEW WING, HOLY INNOCENTS' CHURCH, HAMMERSMITH.—The new west wing of this church was dedicated on the 27th ult. The first portion of the church was consecrated some ten years ago. The second portion has now been completed at a cost of 5,000*l.* The building is of red bricks, with Bath stone dressings. Messrs. Faulkner & Sons were the builders, the architect having been Mr. James Brooks.

NEW SYNAGOGUE, FINSBURY PARK. — The foundation stone of a new synagogue in Princess-road, Finsbury Park, was laid on the 1st inst. by Mr. F. D. Mocatta. The new building, which, when completed, will be the northernmost synagogue of the metropolis, takes the place of temporary premises in Portland-road. When completed it will provide accommodation on the ground floor for 190 gentlemen, and in the galleries for 144 ladies. Mr. Delissa Joseph is the architect, and the work of construction is being carried out by Messrs. L. Whitehead & Co.

COTTAGES, YATTON.—Two cottages have recently been erected on the Claverham House Estate, Yatton. The ground floor contains living-room, kitchen, and wash-house with outhouse, and the first floor three bedrooms. The total cost was 440*l.* for the pair. Messrs. Needham, of Yatton, were the builders; and Mr. C. A. Rowley, of Bristol, the architect.

Y.M.C.A. NEW PREMISES, BURTON.—The memorial stones of these buildings have just been laid. The new premises extend from High-street to Friars-walk, with a frontage the whole depth along Whitehurst's-passage. The main entrance will be in High-street, which leads from the entrance passage into a large entrance-hall, about 20 ft. square, and from this entrance-hall access may be obtained to all parts of the premises. On the ground floor will be found a private room, to be utilised for the general secretary's office. Beyond this room is a large recreation and tea room, boiler-house for the heating-apparatus, and a lavatory block with bath-room, &c. Connected from the entrance-hall by means of a glass-covered corridor is the gymnasium, the length of which is 48 ft., the width 29 ft., and the height to ceiling 19 ft. This room will be provided with a glazed brick dado and a boarded ceiling. The remainder of the ground to Friars-walk is occupied by the lecture-hall (82 ft. long, 30 ft. wide, and 26 ft. high to the ceiling). This hall will have a wood block floor sloping from the entrance end to the platorm, and will have a wooden dado 6 ft. high; the roof will be of heavy pitchpine timbers, resting on carved stone corbels, and all the woodwork is to be stained and varnished. Entrance and egress may be obtained by means of five doorways in this hall, and all the doors are made to open outwards. In connection with this hall are gentlemen's and ladies' cloak-rooms with lavatories attached. On the first floor, which is approached by a stone staircase, is provided a reading-room, with an open timbered roof, and the various other rooms consist of committee-rooms, classrooms, photographic studio and dark-room, with rooms for the caretaker. In addition to the portion of the premises occupied by the Y.M.C.A., other portions of the premises have been let off into suites of offices and a café restaurant, and in connexion with the restaurant a basement kitchen is provided. The premises will be lighted by electricity. The general contractor for the works is Mr. R. Kershaw, and his sub-contractors are Mr. A. Geary (for the joinery), Messrs. T. Turner & Son (for the plumbing and painting), and Mr. T. Biddulph (for the plastering and concrete floors). The architect is Mr. Thos. Jenkins.

BUILDING NOTES, ABERDEEN.—It has now been found that the operations in connection with the extension of Aberdeen Joint Passenger Railway Station will not be proceeded with for about two or three years from this date.—A day or two ago the United Free Presbytery of Aberdeen approved of the plans of the new church at the corner of King-street and Urquhart-road for St. Clement-street Free Church congregation, who have now succeeded in selling their old place of worship. Messrs. D. & J. R. Macmillan, Aberdeen, are architects for the new buildings, which will cost about 7,000*l.*—The master slaters of Aberdeen have formed an association which will enable them to receive scales of measurement and schedules from the Aberdeen Society of Architects for enabling them to estimate for new buildings.—A new theatre is to be built in Rosemount-viaduct for the Robert Arthur's Theatre Company.—The following tenders for new Corporation Electric Station at Dee village have been accepted:—Six boilers, Babcock & Wilcock, 10,175*l.*; joiner work, Geo. Jamieson, Aberdeen, 2,190*l.*; plumber work, Walter Simpson, Aberdeen, 698*l.*; plaster work, James Scott & Son, Aberdeen, 499*l.*; slater work, Adam & Co., Aberdeen, 356*l.*

FLATS, HAMPSTEAD, N.W.—"The Chimes," West End-lane, built from designs by Pugin, for the late E. Herbert, R.A., has just been demolished, and blocks of residential flats are to be erected upon the site, approached by a garden court, with carriage-drive, and will be called "King's-gardens," Hampstead. The building will contain 380 rooms, divided into fifty self-contained flats, carrying from six to eight rooms approached by halls and four electric lifts. The halls, bathrooms, and water-closets will be laid with mosaic. The principal doors and decorative woodwork will be in Spanish mahogany, with marble steps to entrance doorways. The fronts will be carried out with cherry red bricks, gauged arches and aprons, with freestone dressings, and roof covered with green slates. The buildings are to be carried out from designs and under the direction of Messrs. Palgrave & Co., architects, Victoria-street, S.W., and Messrs. Collins & Co. are the contractors.

HOSPITAL, RICHMOND, IRELAND.—The new Richmond Surgical Hospital was opened recently by the Lord Lieutenant of Ireland. The architects of the new building were Messrs. Carroll & Batchelor. The site was previously occupied by old dairy yards and dilapidated buildings, and lies fronting North Brunswick-street, the northern flank being on the avenue leading to the Whitworth and Hardwicke Hospitals and the North Dublin Union. The hospital consists of a central special block containing entrance hall and matron's and resident surgeon's offices and sitting-rooms, and visiting surgeons' consulting-rooms, &c.; to the right and left are the boardroom, children's wards, &c. The central block is connected by wings to the east and west pavilions for women and men respectively. From the west pavilion a corridor leads to the Whitworth Hospital and also to the administration block and nurses' home, which latter buildings are situate on the left-hand side of this corridor. The principal entrance gates are in North Brunswick-street, and a separate entrance for stores is provided from the same street by the side of the old Richmond Hospital. The road leads direct to the delivery yard, which adjoins the kitchen department. The new power house and steam laundry abut on this road at the rear of the old hospital. The new hospital contains accommodation for eighty-four beds, but the scheme provides for a considerable extension in the future. The buildings are faced with bricks, with dressings of Ruabon red terra cotta, whilst the roofs are covered with Cumberland green slates, with the exception of the southern towers and ventilating fleches, which are covered with copper. One of the principal features in the hospital is the operating theatre block. It is approached from the main corridor, the two doors from which open into a waiting corridor or lobby, with windows at each end for the purpose of providing cross ventilation, and thus cutting off this block from the rest of the hospital. The room for administering anæsthetics adjoins this lobby, and is fitted with sinks and lavatory basins, and also an apparatus for sterilising the trays and other utensils in use in the operating theatre. This room communicates directly with the operating theatre, which is one story high, about 29 ft. long by 23 ft. wide. It is lighted by three north windows, and also from the roof. The wall lining in this room, as well as that in the adjoining rooms, is of white glazed bricks, relieved by bands of blue. The floor is of dark red adamantine tiles, and the gallery for the accommodation of students is of white Sicilian marble. The theatre is warmed and ventilated on the Plenum system. Adjoining the theatre is a smaller room for operations. The wards generally (with the exception of those for children) are of one size—viz., 60 ft. by 25 ft., and 14 ft. high—each providing accommodation for fourteen patients with a cubic space of 1,500 ft. per bed. Attached to each ward are a ward kitchen fitted with a small range, sink, plate rack, &c., a Sister's room, linen-room, and separation-room for two patients. At the south end of each ward are provided, in projecting towers separated from the wards by cross ventilated lobbies, a bathroom and lavatories, &c. Between these projecting towers are arranged sun verandahs for the use of the convalescent patients, communicating with the wards by means of French windows. The new kitchen, sculleries, and stores have been designed to serve the whole group of hospitals. Near the hydraulic lift in the basement is situated the admission door, waiting-room, and bathroom for newly-admitted patients, also the stores for patients' clothes, &c. The corridors and staircases throughout the hospital and nurses' home are heated by steam radiators. The wards are warmed by open fires in octagonal faience chimney breasts, which are carried through the centre of the wards. The nurses' home can now accommodate thirty-one nurses, principally in dormitories and associated rooms, and is provided with dining and sitting rooms, scullery, and bathroom and sanitary accommodation.

BISHOP OTTER COLLEGE, CHICHESTER.—A new wing has just been added to the Bishop Otter Memorial College, Chichester. The wing is 120 ft. long, 28 ft. wide, and 54 ft. high from basement floor to ridge. On the basement there are two boilers, one for the general heating of the building and the other for supplying hot water for domestic purposes, bathrooms, and lavatories. The ground floor of the building comprises a hall, 58 ft. 4 in. long, 25 ft. wide, and 14 ft. high; senior students' classroom, 31 ft. long and 25 ft. wide; corridor, 40 ft. long by 6 ft. wide; seniors' and juniors' cloakroom, storeroom, laboratory, and range of sanitary offices. The hall has emergency doors opening outwards. The first floor consists of fifteen sleeping dormitories for students, one mistress's room, a library 31 ft. by 25 ft., two bathrooms, wardrobe accommodation, &c. On the second floor there are

twenty-four similar sleeping dormitories, one mistress's room, bathrooms, boxrooms, and other necessary conveniences. Access to the new wing is obtained from the old part of the college by means of wide archways, while there are fireproof staircases. In connexion with the work for extending the college, alterations have also been carried out in the old part of the building, where several rooms have been thrown into one so as to make a dining hall capable of seating at table a company numbering over 100 persons. In another part several small rooms have been made into one classroom for junior students. The total cost will fall little short of 4,000*l.* The architect was Mr. Gordon P. G. Hills, and the builder was Mr. J. O. Holt.

BOARD SCHOOL, NEWPORT, MON.—The Clytha School, intended to serve the Risca-road district of Newport, was opened recently. The new school building is in the Renaissance style, and has been constructed of red brick with freestone dressing. The school will be a mixed one, and is intended to accommodate 350 scholars. There is a large central hall, and five classrooms leading from it. Separate rooms have bsen provided for the head-master and assistant teachers. The building is one-storied, and the floor is laid with wood blocks. An asphalted playground has been provided. The total cost has been 3,500*l.* Messrs. Habershon, Fawckner, & Groves were the architects, and Mr. Charles Locke was the builder.

SANITARY AND ENGINEERING NEWS.

RESERVOIR, BRISTOL WATERWORKS. — Particulars are given in the Chamber of Commerce report with regard to the new Yeo reservoir of the Bristol Water Works Company, which is approaching completion and is the sixth largest in Great Britain. The water area of the reservoir, when full, is approximately 450 acres, and the reservoir when filled will hold about 1,700,000,000 gallons. The reservoir has been formed by constructing an earthen embankment or dam across the valley of the Yeo at a point close to Blagdon. The embankment at its highest point is 43 ft. above the surface of the ground, and the greatest depth of water in the reservoir will be 37 ft. The length of the embankment is 530 yds., and over the top a carriage road has been constructed to take the place of a portion of the old road to Blagdon, which is submerged in the bed of the reservoir. The length of the lake formed by the reservoir will be about 1¾ miles. The water is taken from the reservoir by means of a brick tunnel 10 ft. in diameter, the water being controlled by large outlet valves. Compensation water has to be provided for the river, and to regulate this water special apparatus has been designed and constructed. The bywash (for the purpose of discharging flood waters), 360 yds. long and 188 ft. wide at the crest of the weir, has been constructed in masonry, chiefly with Cheddar and Tytherington stone pitching, set in cement, while Forest of Dean stone has been largely used in a bridge constructed over the bywash, and in other ornamental parts of the work. The weir stones and the pitching of the inner slopes of the embankment are of Dartmoor granite. At the Rickford spring an ornamental gauge house has been erected for measuring the water, which is conveyed to the reservoir by means of a 27-in. cast-iron pipe, the distance being about two miles Similar arrangements have been made with regard to the Langford spring, and the distance in this case to the reservoir is nearly 3¾ miles, the pipe being 21 in. in diameter. Adjoining the reservoir, engine and boiler houses are in course of erection for the reception of pumping machinery, by means of which the water will be pumped through cast-iron pipes to the existing North Hill tunnel of the Bristol Waterworks Company, a distance of about five miles. The engines are of the compound rotative beam type. The engineers are Messrs. T. & C. Hawksley. —*Western Press.*

SOUTHWARK AND VAUXHALL WATERWORKS.—On the 30th ult. a party of engineers and other gentlemen interested in waterworks visited Hampton Court, at the invitation of the Southwark and Vauxhall Water Company, to inspect the company's new works and cut the sod of the large storage reservoir about to be constructed at Walton. The party included Sir John Aird, M.P., Professor Frankland, Professor T. E. Thorpe, and Mr. J. W. Restler, engineer to the company. The works inspected include a new pumping station, new filter beds, and storage reservoirs. The pumping station consists of three triple expansion engines of 780-h.p. each, built by the North-Eastern Marine Engineering Company, of Sunderland. The boiler-house contains ten Babcock & Wilcox water-tube boilers (land type). The engine-house is lighted by electric arc lamps, the power for which is supplied by one of the patent double triple-expansion engines invented by Mr. Restler. The six new filter beds have only just been completed, and were charged for the first time in the presence of the visitors, who watched the process of admitting the river water. The filtering layer is 3 ft. 6 in. in depth, of which 2 ft. 6 in. is sand. Seven additional filter beds are under construction in the same area. A new instrument for measuring and recording the rate of filtration on the principle of the waste water meter is on trial at the waterworks. After inspecting the filters the party proceeded to the large storage reservoirs, which hold 300 million gallons, and were built in 1899. They form two sheets of water nearly half a mile in length. Before their completion the storage capacity of the company was only 90 million gallons. It is now intended to increase it to 1,512 million gallons by means of a new large reservoir, to be built by Messrs. John Aird & Son, and to hold 1,076 million gallons.

PROPOSED BRIDGE, BARDMONEY FORD, PERTH.—Plans have been passed by the Blairgowrie District Committee of Perth County Council of a bridge which it is proposed to construct over the River Isla at Bardmoney Ford. Messrs. Blyth & Westland, of Edinburgh, are the engineers.

SEWAGE WORKS, SHERINGTON, BUCKS.—A Local Government Inquiry was held by Colonel J. T. Marsh, R.E., at Sherington as to the application for a loan for works of main sewerage and sewage disposal, per plans by Messrs. D. Balfour & Son, of London and Newcastle. The scheme comprises the laying of 3½ miles of main sewers with manholes, flushing arrangements, also the construction of bacterial tanks and the laying-out of the land, the effluent from which will discharge into the River Ouse.

ENGINEERING FEAT AT NEWCASTLE.—An interesting engineering feat was accomplished on the Tyne on the 5th inst., when the spans and roadway of the bridge connecting Newcastle and Gateshead, which had been built 4 ft. 6 in. to the eastward of the position they were ultimately to occupy, were moved over into place. An old bridge existed, and the new bridge has been built on precisely the same site the old one occupied. The traffic has yet gone on uninterruptedly. The new piers were built round about the old ones, and the roadway and spans were erected a little above and 4 ft. 6 in. to one side of the old roadway and spans, a temporary footway meanwhile being provided for foot passengers. The old piers were then taken away and the new roadway was lowered to its proper level, and on the 5th inst. moved over into its permanent position. This was accomplished by means of hydraulic jacks. The total weight of the bridge was 1,600 tons, and the jacks were capable of exerting a pressure of 1,500 lbs. to the square inch. The bridge is built of steel, and is of the American type, but the details are strictly in accordance with the best English practice. There are four spans, two of 252 ft. and each of the others 170 ft. The total length of the bridge and its approaches is 1,900 ft. Its total weight is 2,900 tons. The bridge is carried on cylinder foundations, each 8 ft. in diameter, and sunk to a depth of 50 ft. below low water. There are four cylinders to each pier. The engineers of the bridge are Messrs. Sandeman & Moncrieffe, of Newcastle, and the builders are Sir William Arroll & Co., Glasgow.—*Times.*

MISCELLANEOUS.

PROFESSIONAL AND BUSINESS ANNOUNCEMENTS.—Lowe's Patent Sanitary Pipe Joint Syndicate, Limited, Dashwood House, New Broad-street, E.C., have recently effected an arrangement with Messrs. J. Stiff & Sons, of Lambeth, whereby this firm become their sole agents for London and suburbs. ——In consequence of the death of the senior partner, the late Mr. Alderman Samuel Green, the firm of Messrs. Green & Son, Auctioneers, &c., of St. Swithin's-lane, E.C., will be carried on by his sons and partners, Mr. E. Horace Green, F.S.I., and Mr. Fred. A. Green, F.S.I., under the old name of Green & Son. The "Property Register and Mortgage List" (founded in 1853) will be published monthly, as hitherto.

ELECTRIC LIGHTING, BURY. — Mr. W. O. E. Meade King, M.Inst.C.E., opened an inquiry recently in the Guildhall, Bury St. Edmunds, the Town Council having applied to the Local Government Board for sanction to borrow 12,000*l.* for the purposes of electric lighting. The Mayor (Mr. T. Shillitoe), the Town Clerk (Mr. C. E. Salmon), the Borough Surveyor (Mr. J. C. Smith), the Assistant Electrical Engineer (Mr. Greig), the Borough Accountant (Mr. J. H. Wakefield), and several members of the Council attended.

GASWORKS, PERTH.—The new gasworks which the Corporation of Perth has erected at Friarton were opened on the 26th ult. The following is a list of the contractors:—Excavator, brickwork, &c., Mr. T. P. Jamieson, Baillieston, near Glasgow; carpenter and joiner work, Mr. William McQuibban, Perth; slater work, Messrs. William Brand & Son, Arbroath; plumber work, Mr. J. MacLeish, Perth; plaster work, Mr. Alexander M'Ritchie, Dundee; painter and glazier work, Messrs. G. R. Douglas & Son, Perth; iron and steel roofing, railway girders and tank, Messrs. H. Balfour & Co., Limited, Leven, Fife; retort bench, brick and iron work, elevator, coal breaker, floor and charging machinery, Messrs. West's Gas Improvement Company, Limited, Manchester; condensers and purifiers, Messrs. Clapham Brothers, Keighley, Yorks; exhausters and engines, Messrs. Bryan, Donkin, & Clench, Limited, London; station meter, gauges, &c., Messrs. John Milne & Son, Limited, Edinburgh; sulphate plant, Messrs. R. & J. Dempster, Limited, Manchester; boiler and heater, Messrs. Babcock & Wilcox, Rostrevor.

BRITISH ASSOCIATION OF WATERWORKS ENGINEERS.—The annual meeting of this Association will be held at Birkenhead on July 9, 10, 11, and 12. A number of interesting papers will be presented for discussion, and a lecture on "Rainfall" will be delivered by Mr. Plummer, the Astronomer to the Dock Board. Visits are also being arranged to various waterworks and other places of interest in the vicinity.

HOUSING, HAMMERSMITH.—At a meeting of the Hammersmith Borough Council on Wednesday evening the question of providing housing accommodation for the working classes was discussed at considerable length. The Works Committee had been considering as to the advisability of erecting tenements on the Council's land near the Electricity Station, Fulham Palace-road, having a frontage of 109 ft. 6 in. in Yeldham-road. They had had before them plans prepared by the Borough Surveyor, in which provision was made for three double buildings of eight tenements each—equal to twenty-four tenements in all—of which twelve consist of three rooms each, and twelve of four rooms. It had been feared by some of the members that an old watercourse, known as the "Black Bull Ditch," was in close proximity to the land, but the Borough Surveyor found that the ditch would not interfere with the foundations of the buildings. Ultimately the Council decided that the plans prepared by the Surveyor be approved, and that instructions be given for carrying out the scheme under the provisions of Part III. of the Housing of the Working Classes Act, 1890, subject to the approval of the Local Government Board.

BUILDING SOCIETIES.—Mr. E. W. Brabrook, C.B., F.S.A., Chief Registrar of Friendly Societies, has just made his report for the year 1900 of the proceedings of the registrars under the Building Societies Acts. He states that seventy-three unincorporated societies—that is, Benefit Building Societies which were certified under the Act of 1836 before December 31, 1856, and have not be incorporated under the Acts of 1874 to 1894—still remain on the register. The number of members was returned as 51,771, or 809 for each society stating the number of its members. The total receips of these incorporated societies during the financial year were 19,421,975*l.* or 303,468*l.* for each society stating the amount of its receipts, being nearly thirty-seven times the average of the incorporated societies; but this is accounted for by the exceptional case of a society in London (the Birkbeck) the receipts of which are returned as 17,857,629*l.* If that society be omitted the average income of the other societies falls to 24,831*l.* This interesting group of old societies, all of which have existed more than forty-four years, increased its business during the year 1899 in every respect. They are all English, there being no unincorporated societies in Wales, Scotland or Ireland. Five societies that had formerly been unincorporated obtained certificates of incorporation in the year 1900. Thirteen new societies were incorporated in the same period in England and Wales and one in Scotland. There are now 2,160 societies on the register in England and Wales, 136 in Scotland, and sixty-five in Ireland. In all three parts of the United Kingdom the Societies increased their capital and mortgage balances during the year. The number of members belonging to the societies in the year 1899 was 550,531 in England, 36,831 in Scotland, and 15,619 in Ireland—total, 602,981. The aggregate receipts during the financial year were: England, 36,928,231*l.*; Scotland, 609,248*l.*; Ireland, 487,909*l.*—total, 38,025,368*l.* The liabilities at the close of the financial year were (*for England*): To holders of shares, 33,136,804*l.*; to depositors and other creditors, 22,082,007*l.*; undivided profit, 3,263,777*l.*; total, 58,482,588*l.* (*For Scotland*): To holders of shares, 1,322,680*l.*; to depositors and other creditors, 262,959*l.*; undivided profit, 112,190*l.*; total, 1,697,829*l.* (*For Ireland*): To holders of shares, 646,720*l.*; to depositors and other creditors, 235,395*l.*; undivided profit, 71,153*l.*; total, 953,268*l.* The assets were (*for England*): Balance due on mortgage, 43,140,631*l.*; other assets, 14,987,048*l.*; balance deficit, 354,909*l.*; total, 58,482,909*l.* (*For Scotland*): Balance due on mortgage, 1,547,375*l.*; other assets, 148,851*l.*; balance deficit, 1,603*l.*; total, 1,697,829*l.* (*For Ireland*):—Balance due on mortgage, 865,413*l.*; other assets, 87,190*l.*; balance deficit, 665*l.*; total, 953,268*l.* As compared with the previous year (1898), there are shown (1) an increase in liabilities to shareholders of 499,757*l.*; (2) an increase in liabilities to depositors of 1,046,811*l.*; (3) an increase in undivided profits of 112,991*l.*; (4) an increase in balances due on mortgage of 1,104,411*l.*; (5) an increase in other assets of 659,123*l.*; and (6) a decrease in balances and deficit of 103,975*l.* It thus appears (comments Mr. Brabrook in his summing-up) that more than 38 millions of money has been received by building societies in the year, and that their accumulated capital is more than 60 millions, of which 75 per cent. is in mortgage securities. The improvement which began in 1898 has continued, and the societies have continued considerably to reduce their properties in possession.

ELECTRIC LIGHT, BRISTOL.—The annual report of the Bristol Chamber of Commerce contains an account of the progress made in the electricity department of the Corporation of Bristol. The demand during the past twelve months for elec-

trical energy for lighting, heating, and power is said to have been unprecedented. The increasing popularity of electricity is evidenced by the fact that during the period referred to no less than the equivalent of 22,767 8 c.p. additional lamps have been connected to the Corporation mains; 35,314 yards of additional mains have been laid, including power mains in Portland-square and King-square, and extensions of the lighting mains in all directions. As proof of the increased demand for electricity, it is mentioned that during the month of December 291,064 units were sold, as against 245,329 during the same month of the previous year. The works at Temple Back not being of sufficient capacity to cope with the demand in the near future, the Corporation have purchased 9¾ acres of land by the Feeder-road, at Avonbank, on which it is proposed to erect a large station, the ultimate capacity of which will be 96,000 h.p. At present the contractors are busy constructing the foundations for the first instalment of the scheme, which it is hoped will be ready for running by the coming winter. The contract for the buildings has been let, and tenders for practically all the plant have been accepted. The first instalment of the station will be equipped with Babcock & Wilcox water tube boilers of the largest size, working at 200 lb. per square inch (as compared with 125 lb. per square inch at the Temple Back Works), two alternators of 925 K.W. (1,500 h.p.) capacity each, driven by Willans's high-speed engines.

THE ANCIENT CROSSES AND HOLY WELLS OF LANCASHIRE.—At a meeting of the Lancashire and Cheshire Antiquarian Society, held at Cheetham College, Manchester, recently, Mr. Henry Taylor read the fourth paper of a series of seven on the ancient crosses and holy wells of Lancashire. He dealt with the Hundred of West Derby, which measures, roughly, twenty-six miles from north to south and thirty miles from east to west, its southern boundary being the Mersey. A map exhibited by Mr. Taylor showed the sites and remains of no fewer than one hundred ancient crosses. This large number, he said, was due no doubt to the fact that in this part of Lancashire the Reformers never succeeded in exterminating the old Roman Catholic faith. Many of these crosses were put up in the thirteenth century, or even earlier, to mark the boundaries of church and other lands, and others were erected as market crosses. The demolition of most of these market crosses was in part due to sheer vandalism, and to the fact that it had been found more convenient in modern times to conduct business in town halls or other buildings. Other crosses were placed near holy wells, of which there are several in the Hundred, justly noted, and still occasionally used, for medicinal and healing qualities. A mediæval well adjoining Lathom Park, dedicated to St. Mary Magdalene, was converted by the impoverished son of the seventh Earl of Derby, at the end of the Cromwellian epoch, into a fashionable spa. The spring dried up when mines were sunk at Skelmersdale. Near Ormskirk there was a remarkable group of crosses. Within a circle four miles in diameter there used to be no fewer than eighteen crosses. Several of these were in existence at the time of the first Ordnance Survey, fifty years ago, but only one complete example remained to-day. The group of crosses appeared to lead in three lines from Scarisbrick Priory to the churches at Halsall, Ormskirk, and Burscough Priory, and until quite recently they were used for devotional purposes in Roman Catholic funeral processions, the mourners stopping at the site of every cross to offer prayers for the dead. Another noticeable group of crosses was found near the ancient parks of Ince Blundell, Little Crosby, and Sefton. The landowners in this part of the Hundred had been Roman Catholics for many generations, and the crosses had been well attended to. An ancient cross standing in the Little Crosby Park was said to have been moved there for safety from the village green at Great Crosby. At its foot the proclamations of the manorial court were made, and the ancient custom of flowering the village cross was kept up on St. John Baptist Day so late as the year 1708. In the twelve miles of country between Liverpool and Warrington the remains or sites of upwards of twenty ancient crosses were recorded on the Ordnance maps. Very few of these remained, but some had been restored or rebuilt.

PROPERTY SALES.—In June next, by direction of Earl Wharncliffe, will be offered for sale the freehold estate known as Wharncliffe House, No. 15, Curzon-street. The house, which stands within its own grounds covering about 29,000 feet superficial, is set back from the line of the street and is situated on the site of Keith's "Old Chapel" (the earlier one)—notorious for the Mayfair marriages. The house has an elevation in three floors, with a tetrastyle Ionic order and pediment upon a rusticated base in the centre, the two wings having rounded bays. The frontage extends over 133 ft. The house has belonged during a long period to the Stuart Wortley family, and was the home of James, first Lord Wharncliffe. (2) The Thorney House estate, which extends over 40,000 feet superficial, at the corner of Palace Gate and Kensington Gore, with a frontage of about 174 ft. to the high road and a return frontage of 275 ft. along Palace Gate. The house was built after the Tudor style by Messrs. W. Cubitt & Co. in 1869-70 for William, eighth Duke of Bedford, who had purchased the land from that firm. Our readers will remember that the Duke's covenant to erect not more than one dwelling-house, which was to be used for a private residence only, gave rise to a suit in Chancery, brought against Mr. Hosegood, the owner of the estate, by Mr. G. M. Rogers and the owners of the house in Palace-gate which P. C. Hardwick designed (1873-4) for the late Sir John Millais.* (3) The Royal Orthopædic Hospital (about 7,240 ft. superficial) in Oxford-street, the site of which was valued at 36,000*l.* two years ago by a well-known surveyor. The hospital, established in Bloomsbury-square in 1838 by Dr. Little, migrated to its present quarters about sixty years ago; in 1899 the premises were enlarged and altered, at a cost of nearly 2,000*l.*, after Mr. Keith D. Young's plans and designs, the sanitary works being executed under Professor Corfield's directions. We understand that an offer of 37,700*l.* has been made for the property, which is freehold. (3) Building land at Isleworth, which forms a portion of the Kendal House Estate, the residence of the Duchess of Kendal, *temp.* George I. After her death the grounds were opened as a place of public resort, a dancing-room was built, and an orchestra was erected by the water side; (4) Lauriston House, Wimbledon Common, the home, in his boyhood, of William Wilberforce; (6) Shipton Court, near Chipping Norton, about 1,600 acres, with a fine old Elizabethan house, during many generations past the home of the Reade family, has been sold for nearly 61,000*l.*; and the Kursaal at Margate has been purchased for 16,000*l.*, the sale having been made in the matter of Samuel Allsopp & Sons, Limited, *v.* Margate and Southend Kursaals, Limited, and others. The defendants in that cause acquired the property in 1898, at a cost of 45,000*l.*, and have expended about 2,500*l.* in building operations on the Undercliff, adjoining Fort-parade, for the new frontage, with a sea-wall, 500 ft. long. Mr. George Sherrin and Mr. John Clarke were appointed as architects, jointly, to the company. The plans and designs for the Kursaal at Margate—estimated to cost 90,000*l.*—were prepared by Mr. John Clarke.

AUSTRALIAN MALACHITE.—Hitherto the principal supply of this beautiful marble, which is largely used in Europe for mantelpieces, pedestals, and similar decorative purposes, has been obtained from Russia, but it is equally abundant and fine in quality in New South Wales, where its colour ranges from pale emerald to deep green, the various layers often possessing different shades of colour, and forming a most beautiful and valuable stone for ornamental and inlaying purposes. Crystals are occasionally met with, and sometimes of large size; those from the Cobar mines are particularly beautiful. It is found in most of the upper workings of New South Wales copper mines, as in the Bathurst district, with chlorite, vitreous, yellow, and other copper ores; at Cambalong earthy and fibrous malachite is associated with barytes or heavy spar, and with yellow and peacock ore; at Cobar, County Robinson, with steatite; at Mitchell's Creek, Wellington, county Wellington, mixed with other surface ores, and often containing large quantities of gold and silver.

CAPITAL AND LABOUR.

CARPENTERS' STRIKE, WESTON-SUPER-MARE.—The master builders having refused to comply with the demands made some months ago by the carpenters and joiners for an increase of wages by ½d. per hour, the men have gone out on strike.

STRIKE IN THE LEICESTER STONE MASONRY TRADE.—The dispute in the stone masonry trade in Leicester reached a climax on the 1st. inst., when the men, in accordance with notice given to the masters, refused to continue to work under the conditions which have hitherto prevailed. As a result about 170 men are idle, and their present determination is not to resume work until their demands are conceded. These, briefly, are for an advance of 1d. per hour, making the total 10d. for masons who work in the sheds, and 10½d. for men who work on buildings. They also asked for an alteration of the rules governing their employment. The masters refused both demands, hence the strike.

CARPENTERS' STRIKE IN LIMERICK.—The carpenters of Limerick struck work on the 1st inst. in all the shops where their demand for an increase of wages from 32s. to 34s. per week was not entertained. All the local firms save one refused the claim, which, in addition to increased wages, involves questions regarding the importation of finished woodwork and a limitation of the number of apprentices to be employed.

THE STRIKE IN THE BRADFORD BUILDING TRADE.—A meeting of the master builders of Bradford was held on the 6th inst., and it was reported that masters who were not associated with the society, and who had been paying the old rate of wages, had now ceased to do so and were demanding a reduction. It was also reported that in one instance the joiners and masons had resumed work at the new rate. In reply to a statement issued by the men, arguing that contractors, when taking contracts under the Corporation, should adhere to the standard rate of wages when those jobs were taken, the masters say that some of the principal contracts now going on under the Corporation were taken prior to the last advance given to masons and joiners. For instance, the heaviest contract in the city—the Cartwright Memorial Hall—was let in March, and the masons' advance took place in May, and consequently the contractor has presumably been paying 3s. a week more to his men than he calculated upon. The same conditions apply to the joiners. In the same way as the Cartwright Hall the contracts for the new fire station were let in March, prior to the last advance to masons and joiners. The master masons say that they would have no objection to paying 1s. per hour if the trade would justify it. They declare, however, that the men know the trade has fallen off greatly since the last advance.

* See the *Builder*, November 18, 1899, "Legal: Rogers *v.* Hosegood;" and June 10, 1876 (illustrations).

LEGAL.

POINT UNDER SECTION 145 OF THE LONDON BUILDING ACT, 1894.

IN a Divisional Court of King's Bench composed of Justices Grantham, Kennedy, and Darling, on Friday, the 3rd inst., judgment was delivered in the case of Crow *v.* the Board of Works for the District of Whitechapel on the appeal of the defendants from a decision of Mr. Dickinson, the magistrate sitting at the Thames Police-court, in June last. The case was argued before Justices Kennedy and Darling last December, but their lordships then disagreed and the case was accordingly reheard on April 27 before an additional Judge—Mr. Justice Grantham—and judgment was then reserved. The case was reported in the *Builder* of May 4.

A summons was taken out by Mr. Crow, the District Surveyor, against the defendants, the Local Authority within the meaning of the Electric Lighting Acts, 1882 and 1888, for the district, alleging that the defendants had not given him notice under Section 145 of the London Building Act, 1894, before commencing the construction of a number of boxes or inspection chambers under the streets in the district for the purpose of electric lighting. The magistrate found as a fact that the boxes so constructed "were buildings, structures, or works" within the meaning of Section 145 of the London Building Act, 1894, and having regard to Sections 72, 201, and 203 of the said Act, he held that the provisions of Section 145 were not inconsistent with the provisions in the Special Act, and imposed on the defendants the nominal penalty of 1s., and ordered them to pay 10*l.* 10s. costs. From this decision the defendants appealed.

Mr. Justice Grantham, in the course of his judgment, said he thought that the magistrate had come to a proper decision on the matter. The question was whether the London Building Act of 1894 revoked or altered by the construction of general words the Electric Lighting Acts of 1882 and 1888? Was the language of the former Act, where it directed that notice should be given to the District Surveyor before commencing work, inconsistent with the powers given to the appellants by the Electric Powers Act, 1882 and 1888 and the Provisional Order of 1892, for the supply of electricity to their district? In his Lordship's judgment it was not. It was true that the appellants had power given them to provide electricity for their district, and that they were obliged to lay the scheme they proposed to adopt and the plans by which they proposed to give effect to it before the Postmaster-General and the County Council, but neither one body nor the other was bound to see how the work was done. The necessity of the sanction of the Postmaster-General was for the purpose of enabling him to see that the interests of the Post Office were not prejudiced, and not in any way to provide for supervision of the work done. In the same way the notice to the London County Council as the superior Municipal Authority of the district was desirable, if not necessary, in order that the Council might be cognisant of what was going to be done in one of the districts included in its municipal area on such an important matter as the provision of electricity. Not one of these notices, however, had reference to any control of the way in which the work was to be done, or as to the compulsory supervision of the work during its construction, but Section 145 of the London Building Act, 1894, required such a notice to be given to the District Surveyor as would enable him to know when the work was to be commenced, and the details of the proposed work so that he could survey the work when commenced and see that the details were carried out in conformity with any by-laws that might have been passed with reference to such buildings. He did not see how it could be said that it was inconsistent with, or contradictory to, the general provisions of the Electric Lighting Acts under which the appellants obtained their authority to provide the electricity for their district. For those reasons his judgment must be for the respondent.

Mr. Justice Kennedy concurred, and Mr. Justice Grantham added that although Mr. Justice Darling did not see his way to agree with the judgment of the Court he was at the same time unwilling to differ.

The appeal was accordingly dismissed with costs.

A CONTRACTOR'S DILEMMA.

THE cases *in re* an arbitration between George White and Another and Arthur came before a Divisional Court of the King's Bench composed of Justices Kennedy and Phillimore on May 2, and which raised a question of some importance to contractors as to the construction to be put upon the word "penalty" as used in a contract. The case came before the Court in the form of a special case stated by the Arbitrator from which it appeared that Mr. George White was the assignee of Mr. H. D. Barclay, who had entered into a contract with Mr. Robert Arthur for the supply of an electric light installation for the Princess of Wales's Theatre at Kennington for an agreed sum of 5,000*l.* A clause in the contract provided that the whole of the work, except the plant, should be completed before November 20, 1898, subject to a "penalty" of 15*l.* per day, and that the plant should be completed by December 10, 1898, subject to a penalty of 3*l.* a day for every day the work remained unfinished. The work proceeded until April 5, 1899, when the contractor received notice determining the same. The contractor claimed a considerable sum under the contract, but Mr. Arthur counterclaimed for a large amount including 1,980*l.* as penalties for non-completion of the work within the time provided by the contract. The matter went to arbitration, when on behalf of the contractor it was contended that the sum of 1,980*l.* was not recoverable from him on the ground that the claim was for penalties proper and not for liquidated damages. The arbitrator stated the case to have the opinion of the court as to whether the amounts specified in the contract were "penalties" or "liquidated damages."

Mr. E. Tindal Atkinson, K.C., and Mr. Longstaffe appeared for the plaintiff (the contractor); and Mr. Eldon Bankes, K.C., and Mr. M. V. Bankes for the defendant.

Without calling upon counsel for the defendant, Mr. Justice Kennedy, in giving judgment, said it seemed to him, both from the difference in the two sums mentioned in the contract, and looking at the nature of the work to be done, and the place where it was to be done, that the amounts were intended to be liquidated damages. He was strengthened in that view by the clause in the contract which gave the engineers power, if necessary, to employ other contractors to complete the work, and provided that the defaulting contractor should be liable for loss so incurred, without prejudice to his obligation to pay the penalties incurred by him under the contract. He thought, therefore, that in a contract of that kind, whilst the presumption was in favour of that meaning being attached to the words which they bore *primâ facie*, the real intention in the present case was that the amount specified should be treated as liquidated damages.

Mr. Justice Phillimore agreed.

A DISTRICT SURVEYOR AND HIS FEES.

THE case of Corbett *v.* Badger came before a Divisional Court of King's Bench, composed of the Lord Chief Justice and Mr. Justice Lawrance, on the 3rd and 4th insts., on an appeal from an order of a Metropolitan Police Magistrate, under the London Building Act, 1894, holding that the respondent was entitled to recover from the appellant fees amounting to 546*l.* 7s. 6d., alleged to be due to him as District Surveyor of Lewisham, under the London Building Act, 1894.

It appeared that in 1899 the appellant was the owner of the St. German's Estate, Hither Green, Lewisham, and he contracted with a Mr. John Lawrence, a builder, to erect certain houses on the estate. Mr. Lawrence erected the houses and was paid the contract price, which included any fees which Mr. Lawrence was liable to pay to the respondent under the Act. Section 154 of the Act provides that certain fees shall be paid by the builder or, in his default, by the owner or occupier. Section 157 limiting the time within which they shall be paid, viz., within fourteen days after the roof of any buildings surveyed by the District Surveyor under the Act has been covered in. The latter Section also provided that if the builder, owner, or occupier refused to pay the fees, they might be recovered in a summary manner on its being proved to the satisfaction of the court that a proper bill specifying the amount of the fees was delivered to him in a registered letter addressed to his last known residence. It was admitted that the claim was by the respondent for fees to which he was entitled under the Act. The only question now was whether the complaints had been made within six months after the matter of complaint arose, as was required by the provisions of the Summary Jurisdiction Act, 1848. The facts, as disclosed by the special case stated by the magistrate, showed that the roof was completed in December, 1899, and between January 17 and September 10, 1900, he delivered to the builder the bills contemplated by Sub-section 2 of Section 157 of the London Building Act, 1894. The builder became bankrupt on July 2 and on November 8, summonses were taken out by the District Surveyor against the owner. The question the Court had to determine was whether the six months ran from the expiry of the fourteen days before referred to, or whether they ran from the time the bills were delivered to the builder when some of the summonses would be out of time, or whether they ran from October 20, 1900, the date of the notices to the owner, in which case none of the summonses would be out of time.

After hearing the arguments of counsel their lordships affirmed the decision of the magistrate, holding that none of the summonses were too late. Judgment was accordingly given for the District Surveyor, and the appeal dismissed with costs.

Mr. Macmorran, K.C., and Mr. R. C. Glen appeared for the appellant; and Mr. Ruegg, K.C., and Mr. Montague Shearman for the respondent.

POINT UNDER THE METROPOLIS MANAGEMENT AND BUILDING ACT, 1878.

IN the King's Bench Division, on the 7th inst., Mr. Justice Channell delivered judgment in the case of the St. James's Hall Company *v.* The London County Council, an action tried before his Lordship, sitting without a jury, in order to obtain a decision upon the true interpretation of Section 11 of the Metropolis Management and Building Act, 1878, which gave to the Metropolitan Board of Works (now the London County Council, their successors), certain powers for the prevention of danger from fire in music-halls which had been licensed for the first time prior to 1878.

The Metropolitan Board had exercised those powers in 1885 in reference to the St. James's Hall owned by the plaintiff company, and the company contended that the powers of the section must be exercised once for all. The defendants had served another notice purporting to be under the powers of the section, and the plaintiffs brought the present action for a declaration that the notice was *ultra vires* and for an injunction. The plaintiffs had obtained an interlocutory injunction restraining the defendants from acting upon the notice until the trial, and the question for his lordship was to determine whether the plaintiffs' view of the section was right.

The facts as appeared from the judgment were as follows:—In 1885 the Metropolitan Board, proposing to proceed under the section, prepared a draft notice of their requirements, which was the subject of negotiation between Mr. Walter Emden, the plaintiffs' architect, and the defendants' architect. The result was that modifications of the first proposals of the Board were agreed to which were embodied in the formal notice served and dated August 10, 1885. The works in that notice were done by the plaintiffs at a cost of more than 7,000*l.* The original proposal of the Board included the pulling down of an existing staircase, and the re-erection of a better staircase at the same place. The modifications agreed on included the pulling down of the staircase, but it was agreed that it should not be re-erected, the necessary accommodation being provided elsewhere. One of the things which the defendants now directed was the erection of a staircase at the same spot. Since the works were completed in 1885, the plaintiffs had from time to time at the suggestion of the defendants voluntarily made some alterations in such matters as the seats in the hall and otherwise, but they had done so without admitting the right of the defendants to require them to do those or other alterations. The defendants claiming power under Section 11 of the Act required the plaintiffs to execute further works, the cost of which was estimated at upwards of 4,000*l.*, and had obtained the leave of the Secretary of State to make the requirements, but without prejudice to the question now raised. The question his lordship had to decide was whether the defendants had power under the section to require the plaintiff company to comply with their requirements. His Lordship said it must be assumed that when the works done in pursuance of the former order were completed the defects were remedied, or, at all events that, in the opinion of the Board, they were remedied, and that they could not in the next year have said that they had made a mistake and ought to have ordered something more or something different; and if they could not, neither could the London County Council, who succeeded to their rights. Undoubtedly the Board did exercise in 1885 the powers of Section 11, and if there were any defects now, they either existed prior to the order of 1885, and ought to have been dealt with, or they were occasioned by the works done in pursuance of that order. In either case the powers under Section 11 in his opinion were exhausted and therefore the defendants could not now exercise the powers. In these circumstances he must give judgment for the plaintiffs with costs.

Judgment accordingly.

ACTION AGAINST A DISTRICT COUNCIL FOR NUISANCE.

THE case of Hawkes *v.* the Leyton Urban District Council came before the Court of Appeal composed of Lords Justices Collins and Stirling on the 6th, 7th, and 8th insts., on the appeal of the defendant Council against an order of Mr. Justice Buckley in the Chancery Division, ordering that a writ of sequestration should be issued against the defendants for disobeying an injunction granted in April last year restraining the defendants, at the suit of the plaintiff, a resident at Leyton, from carrying on their works in connexion with electric lighting in such a way as to cause a nuisance by noise and vibration. On two occasions the operation of the injunction was suspended on undertakings given by the Council, on whose behalf it was stated that they were erecting steam plant, which would be no nuisance. Upon appeal this Court confirmed the order of the Court below, but limited the injunction to noise and vibration by the use of gas-engines. The steam plant had since been brought into operation, and it was represented that the gas engines were now only worked for certain hours a day as auxiliary to the steam plant. The plaintiff, contending that the Council had broken their undertaking and disobeyed the injunction, applied for a writ of sequestration, which Mr. Justice Buckley granted, on the ground that the defendants had deliberately and wilfully disobeyed the order of the Court.

Mr. Henry Terrell, K.C., and Mr. Dibdin, K.C., appeared in support of the appeal; and Mr. Astbury, K.C., and Mr. A. Beckett Terrell for the plaintiff.

At the conclusion of the arguments their lordships held that there had been a breach of the injunction, and that the writ must go. It could, however, lie in the office for a week to enable the defendants to apply to Mr. Justice Buckley for any indulgence they might think themselves entitled to.

FORD *v.* BEMROSE & SON.—In the report of Ford *v.* Bemrose & Son in the BUILDER last week the sentence in the judgment "It is true I agreed to erect seventy-two buildings" should read "It is true I agreed to erect your building."

RECENT PATENTS:

ABSTRACTS OF PATENTED INVENTIONS.

338.—KILNS: *C. Czerny and C. Schlimp.*—Gas-fired continuous kilns are built up of two rows of arched chambers, set cross-wise, with an intermediate passage and flues below them; the gas flows through passages underneath the kiln-chamber floor, and thence through passages in the corners of the chamber at a point just under the spring of the arch, whilst the air flows from the chamber which is being discharged through gratings in the floor, and so through all the chambers that are being cooled into the chamber wherein the goods are being burned, that it may mix with the gas therein. The products of combustion are conveyed through the chambers in which the preliminary heating is in progress, and thence follow the course of the air, finally escaping from the most recently charged chamber into the chimney flue. The flues and dampers are duplicated, so that one set may be repaired whilst the other set is being used.

403.—SAWING OF STONE, MARBLE, &C.: *S. Holgate.*—Sliding sleeves, united with girders and cross girders that constitute a frame, are mounted upon three pillars at each side of the machine, and have bearings for the pendulum rods from which the saw-frame is suspended, the upper ends of the rods being T-shaped in order that they may raise weights or touch springs when the stroke is nearly ended. The driving gear, which rises and falls with the saws, is mounted upon the girders, and consists of a crank shaft with a fly-wheel and connecting rods; chains which pass around the drums of shafts driven with worm-gearing, cone pulleys, and fast and loose feed-regulating pulleys feed the sleeves up and down the pillars. Provision is made for driving the crank shaft in any position of the girder-frame by means of a belt around the main and other pulleys.

422.—AN APPLIANCE FOR DRAWING PURPOSES: *F. A. Jones.*—The instrument is devised for use in measuring angles in perspective in drawing from models, and determining the proportional dimensions of the parts of the models. Two graduated arms are pivotted on to a cross-piece of a rectangular frame, on the sides of which is marked a scale of degrees to be traversed by the ends of the arms; two additional arms are adjustably pivoted on to a sleeve that slides upon the cross-piece. When the frame is held at arm's length the required angles and dimensions may be observed, the latter pair of arms serving for use in respect of drawing parallel lines of the models; the four arms may be otherwise mounted between two parallel and graduated frames.

426.—HOISTS FOR BUILDERS' USE: *F. Fishburn.*—The apparatus is intended especially for lifting building materials in wheel-barrows. The lifting-rope is wound around two pulleys at a height above the level up to which the load is to be raised, and engages with a winding groove cut in the winch barrel. When its one end is at its highest level, the other end is at the level of the ground. In the case of heavy loads, the rope should be turned around the barrel more than once, the coils being kept in their places with small pulleys upon spindles that will move and follow the winding groove in the winch, and adjustable guide-pulleys set lengthwise upon a bar will serve to increase the extent of contact of the rope with the barrel.

431.—WORKMEN'S CLAMPS: *F. Beck.*—Upon the top bar is a dove-tailed projection on which the board that supports the work will slide; a screw,

which is to be screwed into the bottom bar, is screwed to the top bar and will adjust the distance between the two bars accordingly with the thickness of the bench or other support, which is gripped firmly by turning the other screw that is passed through the bottom bar and is pressed against the top bar.

435.—SAFETY APPARATUS FOR USE WITH LIFTS: *F. T. Hollins and H. C. T. Amendt.*—When each well-door is closed, its fastening and an electro-magnet above the door are in the circuit of a battery, and the circuit can be completed only with the pressing down of a treadle in order to lock the handing-rope whereupon one can draw the bolt of the door; an electro-magnet (to be energised only when every door is shut) pulls out of engagement a catch which locks the pressed-down treadle. For opening the closed door, a pivoted arm that can be reached from only the outer side of the door works the bolt which holds up a catch consisting of the armature of an electro-magnet, contact becomes broken with the motion of the arm towards the left, and another contact is made by means of which (the treadle having been pressed down) circuit through the magnet becomes complete and the armature is sustained so that the bolt may be drawn. The invention provides, generally, that the doors shall be unlocked as the cage is stopped, when one door is opened the others (as well as the locking-lever of the handing-rope) shall be locked, and all the well-doors shall be locked whilst the cage rises or falls within the well.

442.—A SOLDERING-IRON: *C. Shields.*—Benzine or other spirit fuel is stored within the hollow handle of the soldering-iron, from which a tube extends into a chamber which is covered with a pierced diaphragm. Upon the extended part is a slotted case for the admission of air, and two soldering-irons are mounted upon the head of the case. The supply of vapour to the chamber is regulated with a screwed valve spindle; when vapour has been generated by the heating of the extension, it passes into the casing, where it will become ignited and play upon the irons within a shielded space between the head and one of the irons.

464.—HEATING BUILDINGS WITH HOT AIR: *W. C. Macey.*—At one corner of a rectangular casing is a fire-box from which gases and smoke are conveyed through pipes set with a slight fall and crossing air-chambers around the inner side of the casing. As the air which enters into the lower portions of the chambers becomes warmed, it finds its escape (through slots in the tops of the chambers) to the upper parts, whence it is conveyed for heating the building.

487.—AN APPLIANCE FOR USE WITH BAND-SAWS: *F. W. King.*—In order that the pulleys may better resist the pressure from the wood, and that the saw may be retained upon them, the pulleys are fashioned with recesses at the centres of the rims, into which are inserted bands of some elastic material mixed with bands of webbing or wire-cloth. The curved top of the rubber band projects above the surface of the pulley when it is not forced down by the saw-band. The specification includes other methods of affixing the band.

507.—ELECTRICAL BELLS: *A. Clarke.*—The frame constitutes the core of the magnet. It has pole-pieces and flanges, between which the copper wire is wound. The binding screws, the contact screw, the armature, and the cover are carried upon elliptical flanges, and the bell upon the lower extremity.

533.—A COMBINED SET-SQUARE AND BEVEL: *A. C. Smith.*—Two blades pivoted at one end of a slotted stock with, it may be, a pivoted and slotted blade at the other end, can be clamped in any position required with a set-screw; the blades when not being used can be folded into the slots. Circular slots are cut in the two blades so as to intersect at the middle point between their pivots, and the shank of the clamping screw is passed through the pivots. A stud that works in a cam-slot in one of the blades is attached with an anti-friction roller to the other blade, the cam allowing the motion of one blade to follow that of the other.

552. — KILNS AND FURNACES FOR BURNING LIME, CEMENT, &C.: *E. Gobbe.*—For cooling the material the inventor contrives that air shall enter the base of the furnace in a volume larger than what is needed to support combustion, and that the surplus air shall be carried away through openings and flues in the walls so as to keep them cool. The "baking-zone," less high than is customary, is built up with ribs, the furnace above it has cross walls that form cells, in which the material undergoes the first stage of the heating process; vertical flues (through which stoking tools and fuel may be introduced) are set across the cell-walls and carry combustion products from the "baking-zone" to the chimneys.

564.—TUMBLER LOCKS: *F. Gehle.*—The lock, adapted for windows, doors, and so on, has its tumbler and spring mounted upon the bolt. When the bolt is being locked, the end of the tumbler is first lifted clear from a fixed stump by the turning of the key, which will then force the bolt forwards as it presses against the lower portion of the tumbler. In the event of the employment of a key which is just long enough for lifting the tumbler without throwing the bolt, the bolt will be left in a middle position, from which only the proper key can draw it back.

568.—A DRINKING-APPLIANCE FOR HORSES AND CATTLE: *A. Coulthurst.*—The inventor's object is to lessen the risk of contamination by diseased animals. He provides a separated trough for each animal, and fits the common supply of water with valves and weirs which will prevent it from returning to the supply channel as well as from flowing out of one trough into another, each trough has a non-return valve connected with the common channel, and an overflow pipe conveys surplus water from the troughs.

603.—THE BUILDING OF FLOORS AND CEILINGS: *A. Hurum.*—For sustaining the concrete until it has become set are devised flat angular telescopical bars, of which the adjustable lugs will fit over the lower flanges of the girders, and boards are laid upon the bars, each of which will slide through a guide or sleeve at the end of its companion bar; the lugs are fastened to the bars with pins that pass through them and through holes in clamping-bands.

630. — ELECTRICITY METERS: *F. R. Dick and Reason Manufacturing Company.*—So that a single ordinary meter may be available for measuring the sum of the currents or energy employed upon both sides of a three-wire system, the inventors divide the two sides beyond the meter in the shape of independent two-wire circuits, and connect the two inner wires through low equal resistances to the neutral main, thus the meter—which may be after the maximum demand indicator type—will carry a current in ratio to the sum of the supplied currents, being connected between the separate ends of the two low equal resistances.

641.—SLOP SINKS FOR HOSPITALS, AND A CONTRIVANCE FOR GENERAL FLUSHING APPARATUS: *F. Shanks.*—Ridges, which are formed within the slop sink, act as a support for the bed-pan when it has been inverted upon the sloped bottom of the sink. A vessel, fitted with a tubular outlet valve and an overflow, has a perforated coil at its base, through which steam is admitted for cleansing and sterilising purposes. For obviating the noise of the discharge of flushing-siphons, a screw, which will regulate the size of the air-inlet, is fitted upon the air-pipe, as specified in No. 27,094 of 1897, and a hanging-tube, either pierced at its end or fitted with a dome, is attached to the ball-and-float valve. The tube may be provided with an air-vessel, or be turned into a V-shape, and may be lined with one of rubber constricted near its middle point.

729.—ELECTRICAL SWITCHES AND CUT-OUTS: *C. M. Dorman, R. A. Smith, and H. G. Baggs.*—For increasing pressure upon the contacts when the switch is "on," and lessening it before it is moved "off"; the main contacts are connected by a contact, mounted on an arm or handle, which bears lightly against the main contacts, to the arm or handle is pivotted a lever that will press against the contacts and be itself pressed by a cam upon a pivotted bracket and worked with a weighted handle, an electro-magnet which holds up the armature retains the parts in a closed position, and upon a failure of current in the magnet the weighted handle drops so as to move the cam and free the lever from its catch whereupon a spring breaks the main circuit; the invention comprises modifications of the arrangements described, for example, a toggle-lever, having either direct or indirect action, may be substituted for the cam, and the cam may be worked by the hand.

734.—PANTOGRAPHS AND SIMILAR INSTRUMENTS: *O. Richter.* — Upon the last bar of a "lazy-tongs" adjustment are mounted a tracer and a flanged graduated wheel. The wheel is contrived to drive a recording-wheel with a worm and a worm-wheel, and for setting the instrument at "zero" the latter gearing can be easily put out of action by means of a lever. One end of a bar which is parallel to the last bar of the "lazy-tongs" carries a pencil for the tracing of a reduced diagram or figure. The first bar of that same parallel group carries the fixing-pivot of the "lazy-tongs" at one of its ends.

MEETINGS.

FRIDAY, MAY 10.

Architectural Association.—(1) Special general meeting for the purpose of approving new by-law. 7 p.m. (2) Mr. Alfred Hands, F.R.M.S., on "The Protection of Buildings from Lightning" (illustrated by lantern views); (3) Election of officers. 7.30 p.m.

Society of Arts (*Howard Lectures*).—Mr. Alfred C. Eborall on "Polyphase Electric Working." III. 8 p.m.

SATURDAY, MAY 11.

Royal Institution. — Professor W. M. Flinders Petrie on "The Rise of Civilisation in Egypt." I. 3 p.m.

St. Paul's Ecclesiological Society. — Visit to St. Stephen's Chapel and the Houses of Parliament. 3 p.m.

Northern Architectural Association. — Visit to Collingwood-street and Quayside Buildings, Newcastle. 3 p.m.

MONDAY, MAY 13.

Society of Arts (*Cantor Lectures*).—Sir W. Chandler Roberts-Austen and Mr. T. Kirke Rose, D.Sc., on "Alloys." IV. (This lecture will be delivered by Dr. Rose.) 8 p.m.

Bristol Society of Architects.—Mr. John Fisher on "The Work of Alfred Stevens," with limelight illustrations. 8 p.m.

Clerks of Works Association (*Carpenters' Hall*).—Monthly meeting. Address by the President, Mr. Spencer Green. 7.30 p.m.

TUESDAY, MAY 14.

Royal Victoria Hall, Waterloo-road, S.E. — Dr. Morgan on "Glass."

WEDNESDAY, MAY 15.

Society of Arts.—Mr. Guglielmo Marconi on "Syntonic Wireless Telegraphy." 8 p.m.

Builders' Foremen and Clerks of Works' Institution.—Ordinary meeting of the members. 8 p.m.

British Archæological Association.—(1) Dr. Phené, F.S.A., on "Intercourse between the Civilised People of Britain and the great Centres of Learning and Commerce in Eastern and Western Europe, Africa, and Asia Minor prior to the Roman Age." (2) Mr. A. O. Collard on "The Oyster Dredgers and Flatsmen of Whitstable." 8 p.m.

THURSDAY, MAY 16.

Society of Arts (*Indian Section*).—Mr. L. R. Windham Forrest on "The Town and Island of Bombay—Past and Present." 5 p.m.

Society for the Encouragement of the Fine Arts.—Miss Ethel Halsey on "Some Unfamiliar Masterpieces of the Italian School." Limelight illustrations. 8 p.m.

FRIDAY, MAY 17.

Society of Arts (*Howard Lectures*).—Mr. Alfred C. Eborall on "Polyphase Electric Working." IV. 8 p.m.

Architectural Association Discussion Section. — Mr. P. E. Newton on "A Tour in Mid-France." 7 p.m.

SATURDAY, MAY 18.

Architectural Association.—Last Spring Visit, to Chesterfield House, Mayfair (Lord Burton's). 2.30 p.m.

Association of Municipal and County Engineers.—Oswestry meeting.

Royal Institution.—Professor W. M. Flinders Petrie on "The Rise of Civilisation in Egypt." II. 3 p.m.

Edinburgh Architectural Association. — Visit to Pitfirrane House and Pittencrieff House and Glen.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

April 23.—By J. M. LEEDER & SON (at Swansea).

Swansea, Glamorgan.—St. Helen's-rd., &c., f.g.r. s 106*l.* 16s., reversions in 55 to 62 yrs.	£4,475
Page-st., f.g.r.'s 22*l.* 16s. 6d., reversions in 57 to 62 yrs.	840
Walter-rd., f.g.r.'s 27*l.*, reversions in 55 to 61 yrs.	995
Nicholl-st., f.g.r.'s 57*l.* 7s. 8d., reversions in 59 to 64 yrs.	1,933
George-st., f.g.r.'s 65*l.* 6s. 6d., reversions in 63 and 64 yrs.	2,245
Russell-st., f.g.r.'s 47*l.* 10s., reversion in 64 yrs.	1,760

April 24.—By MORRIS, MARSHALL, & POOLE (at Llanidloes).

Llanidloes, Montgomery. — Cambrian-pl., three freehold houses and four cottages	1,375
Cambrian-pl., two plots of land, f.	230
Gt. Oak-st., eight freehold houses and shops	1,200
New-st., six freehold cottages	300
Penygreen-rd., &c., Spring Mills Factory, with house, two cottages, and land, f.	1,000
Penygreen-rd., &c., two houses, 19 cottages, and plot of land, f.	1,630
Penygreen-rd., four enclosures of land, 10 a. 0 r. 38 p., f.	870

April 26.—By H. J. AUSTEN & SONS (at Tunbridge Wells).

Wadhurst, Sussex.—Skinner's Farm, 56 a. 3 r. 10 p., f.	2,250

April 27.—By WILLSON & PHILLIPS (at Southend).

Southend-on-Sea, Essex.—Princes-st., the Baptist Tabernacle, with schoolroom and house adjoining, f.	2,800
3, Ashburnham-ter., u.t. 68 yrs., g.r. 2*l.* 5s.	410
Foulness, Essex.—Church End, the George and Dragon p.-h., c., r. 70*l.*	1,100

April 29.—By DENNANT & CO

Deptford.—191, 193 and 195, High-st., u.t. 15½ yrs., g.r. 16*l.* 18s., r. 225*l.*	1,300

By L. FARMER & SONS.

Hampstead. — Kingsgate-rd., f.g.r.'s 50*l.* 8s., reversion in 80 yrs.	1,275
Brondesbury.—48, Cavendish-rd., u.t. 68 yrs., g.r. 10*l.*, e.r. 65*l.*	575
Maida Vale.—38, Randolph-gardens, u.t. 74 yrs., g.r. 10*l.*, e.r. 65*l.*	625
Kilburn.—127, Cambridge-rd., u.t. 64 yrs., g.r. 8*l.*	440

By T. G. WHARTON.

Clapton.—114 to 120 (even), 124, 128, 130, 132, 136, 138 and 142, Millfields-rd., u.t. 81½ yrs., g.r. 77*l.* (in lots)	2,605
Acton.—3, 4, 5, and 7, Leamington Park-villas, u.t. 67 yrs., g.r. 26*l.*	960
Brixton.—28, Barrington-rd., u.t. 21½ yrs., g.r. 2*l.* 4s., e.r. 42*l.*	300

By CURTIS & SHARP (at Stratford).

East Ham.—88 and 90, Priory-rd., f.	630
10, 12, 22, and 24, Arragon-rd., f.	1,025
Park-av., six plots of building land, f.	102

By ALFRED RICHARDS (at Tottenham).

Tottenham.—310 and 312, High-rd., f., r. 80*l.*	1,175

April 30.—By BROWETT & TAYLOR.

Barking, Essex.—North-st., Braintree House and plot of building land adjoining, f.	1,035
Hammersmith.—Blythe-rd., two plots of land, f.	290
Bowes Park.—Jones-lane, Oak House and Godstone House, f., e.r. 70*l.*	800

By DUNCAN & KIMPTON.

Hornsey Rise.—29, Hanley-rd., f.	795
31 and 33, Hanley-rd., f., r. 105*l.*	1,485
Grenville-rd., a block of building land, f.	1,060
Ormonde-rd., Maisonette House, f., r. 33*l.*	580
Forest Gate.—69 to 89 (odd), Pevensey-rd., f.	3,090
68 to 74 (even), Pevensey-rd., f.	2,210
75, 77, and 79, Huddlestone-rd., u.t. 81 yrs., g.r. 9*l.*	510
2 and 4, Forest-rd., f.	635
52 and 54, Cann Hall-rd., f.	905
Mile End.—13, Whitman-rd., f.	340
Old Ford.—29 to 35 (odd), Beale-rd., f.	930
28, 30, 32, 34, and 40, Ranwell-st., f.	1,395
Bow.—63, Wellington-rd., f.	345

By FLOOD & SONS.

Bayswater.—207, Westbourne-gr., and 61A, Ledbury-rd., r. 170*l.* 10s.; also l.g.r. 10*l.*, u.t. 43 yrs., g.r. 23*l.* £2,450
Regent's Park.—60, Osnaburgh-st., u.t. 21 yrs., g.r. 30*l.* 315
Westbourne Park.—39, Golborne-rd., u.t. 64 yrs., g.r. 8*l.*, r. 55*l.* 540

By F. PERKS.

Paddington.—6, Westbourne-sq., u.t. 49 yrs., g.r. 15*l.*, r. 80*l.* 750

By RUTLEY, SON, & VINE.

Kentish Town.—18, Queen's-cres., u.t. 48½ yrs., g.r. 8*l.*, r. 42*l.* 320
35, Malden-rd., u.t. 43½ yrs., g.r. 8*l.*, r. 52*l.* 505
26, Prince of Wales-cres., f., r. 36*l.* 600
29, Ferdinand-st., u.t. 43 yrs., g.r. 9*l.*, r. 40*l.* .. 295
Chalk Farm.—7, Oppidan's-rd., u.t. 63½ yrs., g.r. 5*l.* 9s. 795
Holloway.—41, Isledon-rd., u.t. 41½ yrs., g.r. 6*l.* 10s., r. 36*l.* 320

By S. WALKER & SON.

St. George's East.—88 to 96 (even), Cable-st., area 4,912 ft., f., r. 145*l.* 2,530
Richmond, Surrey.—Mortlake-rd., Tanjore and Foxlowe, and a plot of land, f., r. 82*l.* 1,100
35, 37, and 39, Pagoda-av., u.t. 92 yrs., g.r. 23*l.* 8s., r. 118*l.* 1,210
Hornsey Rise.—1, Shaftesbury-rd., f., r. 50*l.* 610

By FREDERICK WARMAN.

Stoke Newington.—68 and 70, Dumont-rd., u.t. 73½ yrs., g.r. 12*l.*, r. 78*l.* 720
Highbury.—24, Kelvin-rd., u.t. 63 yrs., g.r. 7*l.*, e.r. 48*l.* 475
46, Aubert-pk., u.t. 62½ yrs., g.r. 10*l.*, r. 50*l.* 510
4, Highbury-cres., and 2, Holloway-rd., f., r. 110*l.* 1,770
Canterbury, Kent.—22, Palace-st., f., r. 25*l.* 510
36, Northgate-st., f. 260
Canonbury.—58, 60, and 62, Canonbury Park South, u.t. 35 yrs., g.r. 16*l.* 10s., r. 143*l.* 1,535

By WESTON & SONS.

Brixton.—36, 40 to 50 (even), Flaxman-rd., u.t. 63½ yrs., g.r. 14*l.*, r. 246*l.* 3,155
Flaxman-rd., l.g.r. 7*l.*, u.t. 63½ yrs., g.r. 2*l.* 105
34, 36, and 38, Luxor-st., u.t. 63½ yrs., g.r. 6*l.*, r. 122*l.* 1,480

May 1.—By BUNCH & DUKE.

Clapton.—1, Glyn-rd., u.t. 19½ yrs., g.r. 5*l.*, r. 32*l.* 12, Mount Pleasant-le., u.t. 18½ yrs., g.r. 6*l.*, r. 38*l.* 375
Stoke Newington.—19, Mildmay-gr., u.t. 60 yrs., g.r. 7*l.*, e.r. 42*l.* 400
Leyton.—1, 3, 5, and 7, Tyndall-rd., u.t. 83 yrs., g.r. 20*l.* 975
Hackney.—169, Well-st., c. 815

By PERCY H. CLARKE.

Richmond.—1, Beaumont-av., u.t. 92 yrs., g.r. 7*l.*, r. 45*l.* 415

By R. C. S. EVENNETT.

Haslemere, Surrey.—Museum Hill, Weald Mount and Maisonette, f. 1,820

By G. GOULDSMITH, SON, & CO.

Chelsea.—8, 10, and 12, Britten-st., u.t. 7½ and 4 yrs., g.r. 12*l.*, r. 102*l.* 225
Camberwell.—89 and 93, Knatchbull-rd., u.t. 67¼ yrs., g.r. 4*l.*, r. 130*l.* 1,585

By A. PREVOST & SON.

Mile End.—1, Albion-st., u.t. 50½ yrs., g.r. 2*l.* .. 185
164, Jamaica-st., u.t. 12½ yrs., g.r. 4*l.*, r. 36*l.* .. 105
7, 9, and 11, Mossford-st., u.t. 58½ yrs., g.r. 15*l.* 920

By R. PRICE & SON.

Clapham.—18, Lambourne-rd., u.t. 43¾ yrs., g.r. 6*l.*, r. 32*l.* 345
12 and 14, Solon New-rd., f., r. 72*l.* 1,095

By PHILIP STOCK.

Camberwell.—25, Sears-st., f., e.r. 42*l.* 840
Brixton.—58a, Hinton-rd., u.t. 72 yrs., g.r. 1*l.* 10s., e.r. 26*l.* 220

By E. & A. SWAIN.

Chiswick.—17 and 19, Homefield-road, u.t. 89 yrs., g.r. 14*l.*, r. 87*l.* 915

By DUNCAN & KIMPTON.

Exmouth, Devon.—Exeter-rd., &c., f.g.r.'s 22*l.* 10s., reversion in 86 yrs. 620
Forest Gate.—Field-rd., &c., f.g.r. 10*l.* 10s., reversion in 64½ yrs. 290
Pevensey-rd., f.g.r. 12*l.*, reversion in 82½ yrs. .. 325
Old Ford.—Roman-rd., &c, i.g.r. 50*l.* 10s., u.t. 56 yrs., g.r. 13*l.* 710
Northfleet, Kent.—45, High-st., u.t. 76 yrs., g.r. 5*l.*, r. 37*l.* 460
29 and 30, College-rd., u.t. 76 yrs., g.r. 6*l.* 220
Highbury.—125, Grosvenor-rd., u.t. 54¼ yrs., g.r. 8*l.* 8s., r. 72*l.* 680
Holloway.—50, Isledon-rd., and factory premises in rear, u.t. 41½ yrs., g.r. 4*l.* 10s., r. 115*l.* .. 1,100
Mile End.—17, 22, 23, 24 and 25, Longfellow-rd., f. 1,725
54 to 58 and 60, Longfellow-rd., f. 2,290
Old Ford.—1 to 11 (odd), 15, 17 and 19, Gardner's-rd., u.t. 56 yrs., g.r. 9*l.* 1,870
Victoria Park.—91, 93, and 95, Sewardstone-rd., u.t. 56 yrs., g.r. 10*l.* 10s., r. 83*l.* 910
134 and 136, Bishop's-rd., u.t. 56 yrs., g.r. 9*l.*, r. 71*l.* 720
May 2.—By ARTHUR BARTON.
Hackney Wick.—Chapman-rd., f.g.r.'s 19*l.* 5s., reversion in 66 yrs. 450
Chapman-rd., f.g.r.'s 20*l.*, reversion in 22 yrs... 505

By BELTON & SONS.

Pimlico.—Vauxhall Bridge-rd., the Windsor Castle p.-h., u.t. 23 yrs., g.r. 28*l.* 16s., r. 320*l.* 35,500
Haggerston.—Mayfield-rd., the Crown p.-h., an improved rental of 30*l.* for 36 years, with reversion 660
Islington.—Shepperton-rd., the Rotherfield Arms p.-h., &c., l.g.r. 10*l.*, u.t. 22 yrs., g.r. nil 350

By BISLEY & SONS.

Rotherhithe.—79 to 87 (odd), Galley Wall-rd., u.t. 42½ yrs., g.r. 15*l.* 1,150
250 to 262 (even), Rotherhithe New-rd., u.t. 59½ yrs., g.r. 38*l.* 10s. 2,165
Bermondsey.—389 and 391, Southwark Park-rd., u.t. 46 yrs., g.r. 10*l.* 10s. 745

By FAREBROTHER, ELLIS, & CO.

Checkendon, Oxon.—Heath End and 45 a. 1 r. 11 p., f. 1,200
Hyde Park.—16, Cambridge-ter., u.t. 28 yrs., g.r. 10*l.*, r. 110*l.* 850
2, Junction-mews, u.t. 28 yrs., g.r. 6*l.* 16s. 6d., r. 45*l.* 350

Old Charlton, Kent.—111 to 129 (odd), Victoria-rd., u.t. 40 and 41 yrs., g.r. 63*l.*, e.r. 515*l.* (in lots) £3,415

By MATTHEWS, MATTHEWS, & GOODMAN.

Barnes.—2, Mill Hill-rd., u.t. 93½ yrs., g.r. 10*l.*, r. 60*l.* 700

By C. C. & T. MOORE.

Mile End.—17, Carter-st., and 21 and 23, Albion-st., u.t. 73 yrs., g.r. 10*l.* 10s. 635
Clapton.—9 and 11, Mount Pleasant-le., u.t. 29½ yrs., g.r. 7*l.* 470
Spitalfields.—4 and 6, Fournier-st., f., r. 135*l.* 4,100
Holloway.—660 and 660a, Holloway-rd., u.t. 46½ yrs., g.r. 45*l.*, e.r. 126*l.* 400

By NEWBON, EDWARDS, & SHEPHARD.

East Ham.—54, Prestbury-rd., f. 250
Ilford, Essex.—1, 4, and 6, Ilford Market, f., r. 138*l.* 2,265
Forest Gate.—21, Stracey-rd., u.t. 65 yrs., g.r. 5*l.*, r. 26*l.* 220

By STIMSON & SONS.

Pall Mall.—23, Whitcomb-st., u.t. 63 yrs., g.r. 30*l.*, r. 90*l.* 1,030
Forest Hill.—Manor-rd., Granby Mount, Deepdene, Fairholme, and Trefusis, u.t. 75½ yrs., g.r. 42*l.*, r. 168*l.* 1,115
Old Kent-rd.—173 to 179 (odd), Canterbury-rd., with Mission Hall in rear, f. 1,340
Brockley.—3 to 15 (odd), Foxwell-st., u.t. 47 and 54 yrs., g.r. 19*l.* 10s. 770
Sydenham.—Venner-rd, a plot of building land, f. 240
Clapham.—28, Crescent-grove, f., r. 55*l.* 800
Peckham.—19 to 24, York-ter., u.t. 44 yrs., g.r. 15*l.* 895
Catford.—110 and 112, Doggett-rd., f. 710
75, Silvermere-rd., f. 390
Old Kent-rd.—50, Marlborough-rd., u.t. 64 yrs., g.r. 7*l.* 3s. 320

By S. WALKER & SON (at Shepherd's Bush).

Shepherd's Bush.—29a, 31, 33, 35 and 37, Mellina-st., u.t. 52½ yrs., g.r. 30*l.* 908

By NOTLEY & Co. (at Beckenham).

Beckenham, Kent.—4 to 14 (even), Kelsey Park-rd., f. 3,410
7, 8 and 9, Stanmore-ter., f. 1,045

May 3.—By DUNN, SOMAN & COVERDALE.

Bishopsgate.—83, Bishopsgate-st. Without, u.t. 87¾ yrs., g.r. 90*l.*, e.r. 325*l.* 2,000

By J. HOOD & SONS.

Mile End.—5 and 7, Belhaven-st., u.t. 67 yrs., g.r. 6*l.* 350

By HUNTER & HUNTER.

Holloway.—Marlborough-rd., f.g.r. 18*l.* 18s., reversion in 65 yrs. 500

By R. W. MANN & SON.

Westminster.—6, Buckingham-gate, u.t. 57 yrs., g.r. 100*l.*; also 2, Buckingham-gate mews, f. 10,200

By MILLAR, SON, & Co.

Hampstead.—15, Buckland-cres., u.t. 50½ yrs., g.r. 17*l.* 715

By SCOBELL & LAKE.

New Cross.—11, Tressillian-rd., u.t. 64 yrs., g.r. 6*l.*, r. 40*l.* 395

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; e.r. for estimated rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent yd. for yard.

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

	£ s. d.	
Hard Stocks	1 14 6	per 1,000 alongside, in river.
Rough Stocks and Grizzles	1 11 0	" " "
Facing Stocks	2 12 0	" " "
Shippers	2 8 0	" " "
Flettons	1 9 0	" at railway depot.
Red Wire Cuts	1 15 6	" " "
Best Fareham Red	3 11 0	" " "
Best Red pressed Ruabon Facing.	5 5 0	" " "
Best Blue Pressed Staffordshire	4 4 6	" "
Do., Bullnose	4 9 0	" " "
Best Stourbridge Fire Bricks	4 2 6	" " "

GLAZED BRICKS.

Best White and Ivory Glazed Stretchers	13 0 0	" " "
Headers	12 0 0	" " "
Quoins, Bullnose, and Flats	17 0 0	" " "
Double Stretchers	19 0 0	" " "
Double Headers	16 0 0	" " "
One Side and two Ends	19 0 0	" " "
Two Sides and one End	20 0 0	" " "
Splays, Chamfered, Squints	20 0 0	" " "
Best Dipped Salt Glazed Stretchers and Headers	12 0 0	" " "
Quoins, Bullnose, and Flats	14 0 0	" " "
Double Stretchers	15 0 0	" " "
Double Headers	14 0 0	" " "
One Side and two Ends	15 0 0	" " "
Two Sides and one End	15 0 0	" " "
plays, Chamfered, Squints	14 0 0	" " "
Seconds Quality White and Dipped Salt Glazed	2 0 0	" less than best

	s. d.	
Thames and Pit Sand	7 3	per yard, delivered.
Thames Ballast	6 0	" "

PRICES CURRENT (*Continued*).

BRICKS, &c.

	s. d.	
Best Portland Cement	36 6	per ton, delivered.
Best Ground Blue Lias Lime	25 6	" "

NOTE.—The cement and lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime	13s 6d.	per yard, delivered
Stourbridge Fire-clay in sacks, 28s.	od.	per ton at rly. dpt.

STONE.

	s. d.	
Ancaster in blocks	2 0	per ft. cube, deld. rly. depôt.
Bath "	1 7	" "
Farleigh Down Bath	1 8	" "
Beer in blocks	1 6½	" "
Grinshill "	1 10	" "
Brown Portland in blocks	2 2	" "
Darley Dale in blocks	2 1½	" "
Red Corsehill "	2 5	" "
Red Mansfield "	2 4½	" "
Hard York in blocks	2 10	" "

Hard York 6 in. sawn both sides landings, to sizes (under 40 ft. sup.)	2 8	per ft. super. at rly. depôt	
" " 6 in. Rubbed Ditto	3 0	"	"
" " 3 in. sawn both sides slabs (random sizes)	1 3	"	"
" " 3 in. self-faced Ditto	0 9½	"	"

SLATES.

in. in.	£ s. d.	
20×10 best blue Bangor	11 5 0	per 1000 of 1200 at ry. dep.
" best seconds "	10 15 0	" "
16×8 best "	6 2 6	" "
20×10 best blue Portmadoc	10 18 0	" "
16×8 best blue Portmadoc	6 0 0	" "
20×10 best Eureka unfading green	11 2 6	" "
16×8 " "	6 15 0	" "
20×10 Permanent green	10 0 0	" "
16×8 " "	5 12 6	" "

TILES.

	s. d.	
Best plain red roofing tiles	41 6	per 1,000 at rly. depôt.
Hip and valley tiles	3 7	per doz. " "
Best Broseley tiles	48 6	per 1,000 " "
Hip and valley tiles	4 0	per doz. " "
Best Ruabon Red, brown or brindled Do. (Edwards)	57 6	per 1,000 " "
Do. ornamental Do.	60 0	" " "
Hip tiles	4 0	per doz. " "
Valley tiles	3 9	" " "
Best Red or Mottled Staffordshire Do. (Peakes)	50 9	per 1,000 " "
Hip tiles	4 1	per doz. " "
Valley tiles	3 8	" " "

WOOD.

BUILDING WOOD.—YELLOW.

	At per standard. £ s. d.	£ s. d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	16 10 0	18 0 0
Deals: best 3 by 9	14 10 0	15 10 0
Battens: best 2½ in. by 7 in. and 8 in. and 3 in. by 7 in. and 8 in.	12 0 0	13 0 0
Battens: best 2½ by 6 and 3 by 6	0 10 0	less than 7 in. and 8 in.
Deals: seconds	1 0 0	less than best
Battens: seconds	0 10 0	" " "
2 in. by 4 in. and 2 in. by 6 in.	9 10 0	11 0 0
2 in. by 4½ in. and 2 in. by 5 in.	9 0 0	10 10 0

Foreign Sawn Boards—

1 in. by 1¼ in. by 1½ in.	10 0	more than battens.
¾ in.	1 0 0	more than battens.

	At per load of 50 ft.	
Fir timber: Best middling Danzig or Memel (average specification)	4 10 0	5 0 0
Seconds	4 5 0	4 10 0
Small timber (8 in. to 10 in.)	3 12 6	3 15 0
Swedish balks	2 15 0	3 0 0
Pitch pine timber (35 ft. average)	3 10 0	4 0 0

JOINERS' WOOD.

	At per standard.	
White Sea: First yellow deals, 3 in. by 11 in.	27 10 0	28 10 0
3 in. by 9 in.	24 0 0	25 0 0
Battens, 2½ in. and 3 in. by 7 in.	20 0 0	21 0 0
Second yellow deals, 3 in. by 11 in.	22 10 0	24 0 0
" " 3 in. by 9 in.	20 0 0	21 0 0
Battens, 2½ in. and 3 in. by 7 in.	16 10 0	18 0 0
Third yellow deals, 3 in. by 11 in. and 9 in.	16 10 0	18 0 0
Battens, 2½ in. and 3 in. by 7 in.	13 10 0	14 10 0
Petersburg: first yellow deals, 3 in. by 11 in.	25 0 0	26 0 0
Do. 3 in. by 9 in.	22 0 0	23 0 0
Battens	16 10 0	17 10 0
Second yellow deals, 3 in. by 11 in.	18 10 0	20 0 0
Do. 3 in. by 9 in.	17 0 0	18 0 0
Battens	14 0 0	14 10 0
Third yellow deals, 3 in. by 11 in.	15 0 0	16 10 0
Do. 3 in. by 9 in.	14 0 0	14 10 0
Battens	12 10 0	13 10 0
White Sea and Petersburg:—		
First white deals, 3 in. by 11 in.	15 10 0	16 10 0
" " " 3 in. by 9 in.	14 10 0	15 10 0
Battens	12 10 0	13 10 0
Second white deals 3 in. by 11 in.	14 0 0	15 0 0
" " " 3 in. by 9 in.	13 0 0	14 0 0
" " battens	11 0 0	12 0 0
Pitch pine: deals	16 0 0	18 0 0
Under 2 in. thick extra	0 10 0	1 0 0
Yellow Pine—		
First, regular sizes	30 0 0	33 0 0
Broads (12 in. and up)	2 0 0	more.
Oddments	22 0 0	24 0 0
Seconds, regular sizes	24 10 0	26 10 0
Yellow Pine Oddments	20 0 0	22 0 0
Kauri Pine—		
Planks, per ft. cube	0 3 6	0 4 6
Danzig and Stettin Oak Logs—		
Large, per ft. cube	0 2 6	0 3 0
Small " "	0 2 3	0 2 6
Wainscot Oak Logs, per ft. cube	0 5 0	0 5 6
Dry Wainscot Oak, per ft. sup. as inch	0 0 8	0 0 7
in. do. do.	0 0 7	" "

[See also page 477.

COMPETITIONS, CONTRACTS, AND PUBLIC APPOINTMENTS.

(For some Contracts, &c., still open, but not included in this List, see previous issues.)

COMPETITIONS.

Nature of Work.	By whom Advertised.	Premiums.	Designs to be delivered
*Post Office	Middleton Corporation	.....	No date

CONTRACTS.

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c., Supplied by	Tenders to be delivered
Additions to Schools, Park-road, Bingley	.....	Armistead & Smithson, Architects, Bingley, Yorks	May 13
Rebuilding Rossett Mills Bridge	Denbighshire County Council	R. L. Williams, County Surveyor, Denbigh	May 14
Laying Cast-iron Water Mains, Nantymoel	Ogmore Gas and Water Company	G. Adams, Ash Grove, Nantymoel	do.
Offices, Roath	Cardiff Corporation	W. Harpur, Civil Engineer, Town Hall, Cardiff	do.
House, Buckerell, Devon	Mr. A. M. Read	E. H. Harbottle, Architect, County Chambers, Exeter	do.
Electric Light Station	Cleckheaton U.D.C.	Mr. Lund, Surveyor, Town Hall, Cleckheaton	do.
Water Supply Works	Workington Corporation	J. Eden, Civil Engineer, 58, Pow-street, Workington	do.
Road Works, Byde-street, &c.	Hertford Corporation	J. H. Jevons, Civil Engineer, Town Hall, Hertford	do.
*Road-making Works	Hove Corporation	Borough Surveyor, Town Hall, Hove	May 15
*Street Masonry and Jobbing Works	do.	do.	do.
Street Works, &c.	Chepping Wycombe Corporation	T. J. Rushbrooke, Borough Surveyor, Easton-st., High Wycombe	do.
Road Materials, &c.	Newmarket U.D.C.	S. J. Ennion, Deva Chambers, Newmarket	do.
Granite, &c. (2,000 tons)	Poole (Dorset) Town Council	J. Elford, Borough Surveyor, Poole	do.
Twenty Cottages, Western-road	Brentwood U.D.C.	C. E. Lewis, Council Offices, Brentwood	do.
Station Buildings, North Skelton, Yorks	North-Eastern Railway Company	W. Bell, Architect, North-Eastern Railway Station, York	do.
Additions, &c., to Moresdale, Grayrigg, Kendal	Mr. W. Thompson	S. Shaw, Architect, Kendal	do.
Additions to Schools, Bucknell, Salop	.....	T. Evans, Architect, Market Buildings, Craven Arms	do.
Additions to Tram Shed, Skircoat-road	Halifax Corporation	J. Lord, Civil Engineer, Town Hall, Halifax	do.
Business Premises, Crown-street, Darlington	Messrs. Todd Bros.	G. G. Hoskins, Architect, Darlington	do.
Alterations, &c., at Town Hall	Eastbourne Town Council	W. C. Field, Borough Architect, Town Hall, Eastbourne	do.
Conveniences, &c., Sun-street and others	Keighley Corporation	W. H. Hopkinson, Civil Engineer, Town Hall, Keighley	do.
*Extension of Board Room, &c.	Wandsworth and Clapham Union	Lansdell & Harrison, Architects, 38, Bow-lane, Cheapside, E.C.	do.
Schools, Heaton	Newcastle-on-Tyne School Board	S. D. Robin, Architect, 110, Pilgrim-street, Newcastle-on-Tyne	May 16
Schools, &c., Lumphinnans	Lochgelly (N.B.) School Board	W. Birrell, Architect, Cupar	do.
Sewerage Works, Kildare	Naas (Ireland) R.D.C.	F. Bergin, Engineer, Kildare	do.
House and Shop, Butcher-row	Salisbury Charities Trustees	J. Harding & Sons, Architects, 58, High-street, Salisbury	do.
Vicarage, Cadoxton, Neath	Rev. J. D. James	J. W. Rodger, 14, High-street, Cardiff	May 17
Hospital	Down District Asylum Commrs.	S. Rea, District Asylum, Downpatrick	do.
Additions to Workhouse, Bangor-road	Conway Guardians	T. B. Farrington, Architect, Trinity-square, Llandudno	do.
Surveyor's Materials	Castle Donington (Derby) R.D.C.	J. W. Newbold, Becket-street, Derby	do.
House, Coldholme, Aberdeen	.....	J. Craigen, 193, Union-street, Aberdeen	do.
Public Hall, Cumwhitton, Carlisle	Committee	J. A. Ferguson, Cumwhitton	do.
Foundations for Hospital, Cardiff	.....	R. W. M. Corbett, Architect, Castle-street, Cardiff	May 18
Hospital, Cardiff	.....	do.	do.
Two Houses, Billingshurst, Sussex	.....	W. Buck, Architect, Horsham	do.
Chapel, Mardy, Wales	Wesleyan Trustees	J. L. Smith & Davies, Architects, Aberdare	do.
Three Houses, Mardy, Wales	do.	do.	do.
Additions to Premises, Head-street, Colchester	Mr. H. L. Griffin	J. W. Start, Architect, Colchester	do.
Road Works, The Crescent	Leatherhead U.D.C.	J. R. Harding, Civil Engineer, High-street, Leatherhead	do.
Sewers, &c.	Bury (Lancs) Corporation	J. W. Bradley, Civil Engineer, Town Hall, Bury	May 20
Twenty-five Houses, Ladmanlow, near Buxton	Buxton Lime Firms Co., Ltd.	W. R. Bryden, Architect, 1, George-street, Buxton	do.
*Furniture	East Ham School Board	Clerk, School Board Offices, East Ham, E.	do.
Roads, &c., St. Anne's Estate, Barnes	.....	F. & W. Stocker, Surveyors, 90, Queen-street, Cheapside, E.C.	May 21
Five Houses, Rothwell-road, Halifax	.....	R. Horsfall & Son, Architects, Halifax	do.
*Shops and Office Premises	Walthamstow Parochial Charities	W. A. Longmore, Bridge-chambers, Hoe-street, Walthamstow	May 23
*Supplying and Fixing Lamps, &c.	Egham Parish Council	J. A. Spiller, Parish Council Offices, High-street, Egham	do
Eighteen Houses, Warley-road, Halifax	.....	M. Hall, Architect, Halifax	May 24
Water Supply Works	Carlisle Corporation	C. B. Newton, Civil Engineer, Victoria Viaduct, Carlisle	May 25
*Covered Way	Southwark Guardians	G. D. Stevenson, Architect, 13, King-street, E.C.	May 30
*Alteration to Offices	do.	do.	do.
*School Buildings	West Hartlepool School Board	School Board Offices, Park-road, West Hartlepool	May 31
*Semi-detached Dwelling Houses	.....	S. Knight & Parkinson, 175, Temple-chambers, Tudor-st., E.C.	No date
Villa, Oakenshaw, Bradford	Mr. J. H. Field	J. W. Broughton, Architect, 19, High-street, Skipton	do.
Additions to Cark Manor, Ulverston	Mr. R. W. Wakefield	Settle & Farmer, Architects, Ulverston	do.
Roofing Works, &c., Wakefield	.....	J. Rhodes & Sons, Limited, Engineers, Wakefield	do.
Two Houses, Catcliffe, Rotherham	.....	G. H. Johnson, Architect, 38, High-street, Rotherham	do.
Four Villas, West Bridgford	.....	H. Allcock, Architect, Bentinck-buildings, Nottingham	do.
Villa Residence, Penydarren Park, Merthyr	.....	E. A. Johnson, Architect, Abergavenny	do.
Additions to Church, Hessle	Vicar and Churchwardens	Brodrick & Co., Architects, Hull	do.
Six Houses, Mickley, Stocksfield	.....	Badenoch & Bruce, Architects, 55, Pilgrim-street, Newcastle	do.
Two Villas, near St. Kilda's Church, Griffithstown	.....	M. Davies, Staffordshire-row, Griffithstown, Wales	do.
Works, &c., at Cottage Homes, Wednesfield	Wolverhampton Guardians	F. Harrison, St. Peter's Close, Wolverhampton	do.
Offices, &c., Bush Hill Park, Enfield	.....	Crickmay & Sons, Architects, 13, Victoria-street, S.W.	do.
Seven Houses, Ebbw Vale, Mon	.....	E. A. Johnson, Architect, Abergavenny	do.
Church Hall, &c., Leadgate, Durham	Trustees	J. E. Parker, Architect, Primrose House, Blackhill	do.
Chapel, Beeston Hill, Leeds	.....	W. A. Hobson & Co., Architects, 82, Albion-street, Leeds	do.
*Artizan Dwellings	Lambeth Hayles Charity Trustees	See Advertisement	do.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*Clerk of Works	Daventry R.D.C.	.....	May 14
*Clerk of Works	Wandsworth & Clapham Guardns.	3l. 3s. per week	May 15
*Architectural Draughtsman	Plymouth Corporation	100l. per annum	May 18
*District Road Surveyors (Four)	Nottingham Corporation	175l. per annum	do.
*Borough Engineer and Surveyor	Hampstead Borough Council	600l. per annum	May 20
*General Superintendent of Roads	do.	200l. per annum	do.
*Junior Civil Engineering Assistant	Shanghai Municipal Council	240l. per annum	May 25
*County Surveyor	Breconshire County Council	250l. per annum	June 1
*Clerk	Leyton U.D.C.	60l. per annum	No date

These marked with an asterisk (*) are advertised in this Number. Competitions, p. iv. Contracts, pp. iv. vi. viii. x. & xxii. Public Appointments, p. xix. & xxii.

PRICES CURRENT (*Continued*).

WOOD.

	At per standard. £ s. d.	£ s. d.
Dry Mahogany—		
Honduras, Tabasco, per ft. sup. as inch	0 0 9	0 0 11
Selected, Figury, per ft. sup. as inch	0 1 6	0 2 0
Dry Walnut, American, per ft. sup. as inch	0 0 10	0 1 0
Teak, per load	16 0 0	20 0 0
American Whitewood Planks—		
Per ft. cube	0 2 3	0 3 0
Prepared Flooring—	Per square.	
1 in. by 6 in. and 7 in. yellow, planed and shot	0 13 0	0 16 6
1 in. by 6 in. and 7 in. yellow, planed and matched	0 13 6	0 17 6
1¼ in. by 6 in. and 7 in. yellow, planed and matched	0 16 0	1 1 0
1 in. by 6 in. and 7 in. white, planed and shot	0 11 0	0 13 0
1 in. by 6 in. and 7 in. white, planed and matched	0 11 6	0 13 6
1¼ in. by 6 in. and 7 in. white, planed and matched	0 14 0	0 16 6

JOISTS, GIRDERS, &c.

	In London, or delivered to Railway Vans, per ton. £ s. d.	£ s. d.
Rolled Steel Joists, ordinary sections	7 15 0	8 15 0
Compound Girders „ „	9 10 0	10 15 0
Angles, Tees and Channels, ordinary sections	9 7 6	11 7 6
Flitch Plates	9 15 0	10 10 0
Cast Iron Columns and Stanchions, including ordinary patterns	8 5 0	10 0 0

METALS.

	Per ton, in London. £ s. d.	£ s. d.
IRON.—		
Common Bars	8 10 0	9 0 0
Staffordshire Crown Bars, good merchant quality	9 0 0	9 10 0
Staffordshire "Marked Bars" ..	11 10 0	- - -
Mild Steel Bars	9 0 0	10 0 0
Hoop Iron, basis price	9 10 0	10 0 0
„ „ galvanised	16 0 0	- - -
(* And upwards, according to size and gauge.)		
Sheet Iron, Black.—		
Ordinary sizes to 20 g.	10 5 0	- - -
„ „ to 24 g.	11 10 0	- - -
„ „ to 26 g.	12 15 0	- - -
Sheet Iron, Galvanised, flat, ordinary quality.—		
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	12 15 0	- - -
„ „ 22 g. and 24 g.	13 5 0	- - -
„ „ 26 g.	14 10 0	- - -
Sheet Iron, galvanised, flat, best quality.—		
Ordinary sizes to 20 g.	16 10 0	- - -
„ „ 22 g. and 24 g.	17 0 0	- - -
„ „ 26 g.	18 10 0	- - -
Galvanised Corrugated Sheets.—		
Ordinary sizes, 6 ft. to 8 ft. 20 g.	12 15 0	- - -
„ „ 22 g. and 24 g.	13 5 0	- - -
„ „ 26 g.	14 0 0	- - -
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. by 20 g. and thicker	12 10 0	- - -
„ „ 22 g. and 24 g.	13 10 0	- - -
„ „ 26 g.	14 10 0	- - -
Cut nails, 3 in. to 6 in.	10 10 0	- - -
(Under 3 in. usual trade extras.)		
LEAD—Sheet, English, 3 lbs. & up.	15 10 0	- - -
Pipe in coils	16 0 0	- - -
Soil Pipe	18 10 0	- - -
ZINC—Sheet—		
Vieille Montagne ton	24 0 0	- - -
Silesian	23 10 0	- - -
COPPER—		
Strong Sheet per lb.	0 1 0½	- - -
Thin „	0 1 2	- - -
Copper nails „	0 1 2	- - -
BRASS—		
Strong Sheet „	0 0 11	- - -
Thin „	0 1 1	- - -
TIN—English Ingots „	0 1 4	- - -
SOLDER—Plumbers' „	0 0 7	- - -
Tinmen's „	0 0 8	- - -
Blowpipe „	0 0 9	- - -

ENGLISH SHEET GLASS IN CRATES.

15 oz. thirds	3d. per ft. delivered.
„ fourths	2¾d. „ „
21 oz. thirds	3¾d. „ „
„ „ fourths	3¾d. „ „
26 oz. thirds	5d. „ „
„ „ fourths	4¼d. „ „
32 oz. thirds	6d. „ „
„ „ fourths	5¼d. „ „
Fluted sheet, 15 oz.	3½d. „ „
„ „ „ 21 „	4¼d. „ „
½ Hartley's Rolled Plate	3d. „ „
¼ „ „ „	3½d. „ „
⅛ „ „ „	4d. „ „

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 2 6
„ „ „ in barrels	„	0 2 7
„ „ „ in drums	„	0 2 9
Boiled „ „ in pipes	„	0 2 8
„ „ „ in barrels	„	0 2 9
„ „ „ in drums	„	0 2 11
Turpentine, in barrels	„	0 2 6
„ in drums	„	0 2 8
Genuine Ground English White Lead	per ton	24 10 0
Red Lead, Dry	„	24 10 0
Best Linseed Oil Putty	per cwt.	0 9 0
Stockholm Tar	per barrel	1 10 0

PRICES CURRENT (*Continued*).

VARNISHES, &c.

	per gallon £ s. d
Fine Elastic Copal Varnish for outside work	0 16 6
Best Elastic Copal Varnish for outside work	1 0 0
Best Elastic Carriage Varnish for outside work	0 16 6
Best Hard Oak Varnish for inside work	0 10 6
Best Extra Hard Church Oak Varnish for inside work	0 10 6
Fine Hard Copal Varnish for inside work	0 16 0
Best Hard Copal Varnish for inside work	1 0 0
Best Hard Carriage Varnish for inside work	0 16 0
Extra Pale Paper Varnish	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 9 0
Berlin Black	0 15 0
Knotting	0 10 0
Best French and Brush Polish	0 10 0

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A. S. (Amounts should have been stated).

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All communications regarding literary and artistic matters should be addressed to THE EDITOR; those relating to advertisements and other exclusively business matters should be addressed to THE PUBLISHER, and *not* to the Editor.

TENDERS.

[Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 10 a.m. on Thursdays.* N.B.—We cannot publish tenders unless authenticated either by the architect or the building-owner; and we cannot publish announcements of tenders accepted unless the amount of the tender is given, nor any list in which the lowest tender is under £100, unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

DEVONPORT.—For alterations to business premises, No. 17, William-street, for Mr. C. F. Hocking. Mr. Edgar M. Leest, architect, Public Hall Chambers, Devonport :—

W. E. Blake	£576 0	Smith & Son	£487 15
W. Littleton	536 10	Jenkin & Son*	475 0
G. B. Turpin	494 0		

HUNSTANTON.—For erecting a residence at Hunstanton, Norfolk, for Mr. E. Dawbarn. Mr. Herbert J. Green, architect and surveyor, 31, Castle Meadow, Norwich :—

W. H. Brown	£1,554 19 6	W. F. Smith	£1,400 0 0
F. Giddings	1,537 1 5	F. Southgate	1,126 0 0

KIRKCALDY.—For the erection of sanitary conveniences at Pathhead Public School, for Dysart Burgh School Board. Mr. D. Forbes Smith, architect. Quantities by the architect :—

Masonry.—Balfour Bros., Sinclairtown*	£50 6 3
Joinery.—David Wishart, Pathhead*	28 8 0
Plumbing.—James Robb, Dysart*	49 11 7
Slating.—Robert Page, Pathhead*	5 10 0
Plastering.—H. Masterton, Sinclairtown*	26 0 0
Total	£159 15 10

KIRKCALDY.—For the erection of twenty workmen's houses at Boreland, for the Earl of Rosslyn's Collieries, Limited. Mr. D. Forbes Smith, architect. Quantities by the architect :—

Masonry.—D. Wilkie, Sinclairtown*	£891 14 6
Joinery.—T. Millar, Kirkcaldy*	819 0 0
Plastering.—Hutchison, Sinclairtown*	166 0 0
Plumbing.—James Robb, Dysart*	157 14 9
Slating.—Currie & Cant, Kirkcaldy*	100 0 0
Total	£2,134 9 3

KIRKCALDY.—For the erection of a billiard-room at the Laurels, Sinclairtown, for Mr. David McLaren. Mr. D. Forbes Smith, architect. Quantities by the architect :—

Masonry.—D. Wilkie, Sinclairtown*	£189 16 6
Joinery.—Hay & Son, Dysart*	178 18 11
Plastering.—H. Masterton, Sinclairtown*	54 15 0
Plumbing.—J. Crombie, Sinclairtown*	15 10 6
Total	£439 0 11

LONDON.—For the erection of ten detached houses in Shepherd's Hill, Highgate, for the Freehold and Leasehold Investment Company, Limited. Mr. Eugene C. Beaumont, architect :—

Thos. Boyce	£25,858	Lawrence & Sons	£20,322
Roome & Co.	22,917	H. Brown	19,833
Adamson & Sons	21,264	Grover & Son*	19,734

LONDON.—For erecting a dwelling-house and shop, Whitechapel, E. Mr. Ernest H. Abbott, architect, 6, Warwick-court, Gray's Inn, W.C. Quantities by Mr. Alfred Johnson, 34, Imperial Buildings, Ludgate Circus, E.C. :—

G. E. Todd & Co.	£1,232	A. E. Symes	£945
Arthur Webb	989	R. & E. Evans	839

NOTTINGHAM.—For the erection of two houses and shop in Narrow Marsh. Mr. Fred. C. Martin, architect, Angel-row, Nottingham :—

Wm. Maule	£745	T. H. Harper*	£570
A. B. Clarke	647		

PURFLEET.—For construction of camp-sheeting to new wharf at Purfleet, Essex, for Messrs. Otto Trechmann, Limited. Messrs. Wigg, Oliver, Hudson, & Co., architects, 80, Leman-street, E., and 7, Bedford-row, W.C. :—

Chafen & Newman* £6,225

RUSHDEN.—For the erection of two houses, Higham-road, Rushden, for Mr. F. J. Abbott. Mr. H. Adnitt, architect, Rushden :—

F. Henson	£580	T. & C. Berrell	£549
Hacksley Bros.	570	Whittington & Tomlin	545
R. Marriott	559	H. Sparrow	540
T. Wilmott	559	E. Mitchell, Irchester*	519
C. E. Bayes	549	T. Swindall	517

RUSHDEN.—For alterations and additions to shop and printing offices, High-street, Rushden, for Mr. W. Mark. Mr. H. Adnitt, architect, Rushden :—

T. Swindall	£370	H. Sparrow	£307
T. & C. Berrell	323	E. Mitchell, Irchester*	300
Whittington & Tonlin	319		

WALSALL.—For nurse's home and out-patients' department, Walsall, for the Executive Committee of the Walsall and District Hospital :—

F. Lindsay Jones	£5,983	G. H. Marshall	£5,390
Harley & Son	5,950	W. Hopkins	5,300
Willcock & Co.	5,945	Sapcote & Sons	5,298
T. Tildesley	5,895	W. Harvey Gibbs	4,830
S. Wootton	5,875	J. Mallin, West Bromwich*	4,790
W. Wistance	5,856		
W. & J. Webb	5,498		

WATFORD.—For the construction of the main sewerage and sewage disposal works at Radlett, for the Watford Rural District Council. Mr. Ernest Lailey, Engineer to the Council :—

Henry Brown, Watford* £6,957.
[Engineer's estimate, £7,100]

LONDON SCHOOL BOARD TENDERS.

AT the last meeting of the London School Board, the Works Committee submitted the following lists of tenders. Mr. T. J. Bailey is the Board's Architect :—

* *Recommended for acceptance.*

BROCKLEY-ROAD.—Providing additional cloakroom accommodation for infants' department, raising the existing stone gateway in boundary wall to Beecroft-road, and providing steps on playground side of same :—

G. Kemp	£250	H. Leney	£210
Garrett & Son	227	H. Groves	206
J. & C. Bowyer	213	A. J. Acworth*	172

GREENWICH (Divisional Offices Site). — Science Demonstration and Metalwork room on ground floor; Manual Training Centre on first floor, and enclosing, draining, and tar-paving the additional land :—

Bulled & Co.	£2,900	Smith & Sons, Ltd.	£2,664
Johnson & Co.	2,837	F. & H. F. Higgs	2,656
J. & C. Bowyer	2,780	Kirk & Randall	2,612
J. Appleby	2,700	Holliday & Greenwood, Ltd.*	2,588
Wall & Co.	2,695		

HASELTINE-ROAD. — Enlargement — boys, 146; girls, 146; infants, 146. Total, 438. Providing new classrooms of 56, 50, and 40 for each department, new cloakroom for each department, and two new staircases for boys, converting existing boys' staircase for use of girls. Providing two new water-closets for each department, and new division wall between boys' and girls' and infants' playgrounds, and refixing covered playground for girls and infants. Rebuilding boys' water-closets and urinals. Providing storeroom and extending heating apparatus. Heating by open fires. Revised accommodation—boys, 506; girls, 506; infants, 629. Total, 1,641.

Garrett & Son	£9,442	F. & H. F. Higgs	£8,636
Kirk & Randall	9,095	Holliday & Greenwood, Ltd.	8,395
Johnson & Co., Ltd.	8,796	J. & C. Bowyer	8,353
Lawrance & Sons	8,732	Mitchell & Sons*	7,828
Bulled & Co.	8,671		

KINGSGATE-ROAD SITE.—Providing and fixing fencing, &c. :—

Bristow & Eatwell	£97 0	Hawkins & Co.*	£85
J. & W. T. Hunter	85 10		

MANSFORD-STREET.—Altering the position of two sliding glazed partitions, and providing an additional similar partition in place of a revolving shutter, in order to more equally divide classrooms B, C, D, and E, infants' department. Replacing the revolving shutters between the same rooms, and a hall with fixed glazed framing :—

J. F. Holliday	£371 0 0	Johnson & Co.	£320 0 0
Bruce, Croom & Co.	341 8 8	Stevens Bros.	305 0 0
Williams & Son	332 0 0	F. & F. J. Wood	256 0 0
		G. Barker*	235 0 0

| *See also next page.*

Repairing furniture, &c., at the following schools:—

Contractors.	Sydenham Hill-road.	Olga-street.	Canterbury-road.	Cobourg-road.	Surrey-square.	Tennyson-street.	Netherwood-street.	Essex-street.	Marner-street.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
H. Bouneau	35 8 6	173 14 3	53 3 0	138 10 0	24 10 6	238 10 0	20 5 0	109 8 6	35 10 0
T. Cruwys	33 9 0	179 0 0	49 15 0	132 0 0	22 11 9	227 12 0*	18 11 6*	120 0 0	33 9 6
General Builders, Ltd.	19 0 0*	199 0 0	40 0 0*	239 0 0	31 0 0	229 0 0	33 0 0	£9 0 0*	39 0 0
Hammer & Co., Ltd.	28 0 0	148 0 0	44 0 0	70 10 0*	26 5 0	235 0 0	32 10 0	95 5 0	39 7 0
London School Furniture Company	28 4 0	147 14 6*	45 9 3	113 10 0	15 16 6*	238 15 3	19 3 0	97 1 9	29 18 3*

MANOR-LANE SITE.—Providing and fixing fencing, &c.:—

W. Harbrow	£221 11	J. Mitson & Co.*	£203 0
H. Groves	209 0		

"MILLBANK."—Providing and fixing complete low-pressure hot-water apparatus to ten classrooms, two halls, drawing classroom, cloakrooms, corridors and lavatories (boys and girls) in graded school:—

Wippell Bros. & Row	£590	Wontner-Smith, Gray, & Co.	£495
G. Davis	536	Purcell & Nobbs	442
Stevens & Sons	512	G. & E. Bradley*	361
Kite & Co.	495		

PONTON-ROAD.—Rearranging and refitting with separate pans the boys' and infants' offices in the playground, and girls' offices on roof playground; providing necessary drains for baths and lavatories, wastes, &c., in connexion with proposed industrial school and new drainage scheme:—

G. Kemp	£2,316 0 0	R. P. Beattie	£2,088 9 5
Lorden & Son	2,222 0 0	Peattie Bros.	1,988 10 0
Johnson & Co.	2,142 0 0	H. Leney*	1,880 0 0

"PULTENEY."—Altering the position of an existing partition and providing a new glazed partition in order to divide classrooms A and B, infants' department, into three rooms; also altering the stepped flooring in two of the rooms so as to obtain left lighting, and forming two new classroom doorways in connexion therewith, &c.:—

Lathey Bros.	£267	R. S. Buckeridge	£192
General Builders, Ltd.	257	Barrett & Power*	192
M. Pearson	210		

ROTHERHITHE NEW-ROAD.—Providing a drawing class room, balance-room, and lecture-room over boys' covered playground:—

J. Appleby	£2,160	W. Downs	£1,945
Bulled & Co.	1,996	Maxwell Brothers, Ltd.	1,850
T. L. Green	1,985	W. V. Goad	1,825
Holliday & Greenwood, Ltd.	1,966	E. Triggs*	1,790
Marsland & Sons	1,950		

SANTLEY-STREET.—Providing and fixing complete low-pressure hot-water apparatus for three halls, eighteen classrooms (boys', girls', and infants' departments), drawing classroom, corridors, cloakrooms, and lavatories:—

Cannon & Sons	£989	Williams & Sons, Cardiff, Ltd.	£650
Wontner-Smith, Gray, & Co.	748	Defries & Sons, Ltd.	579
Dargue, Griffiths, & Co., Ltd.	738	G. & E. Bradley	565
J. & F. May	720	The Brightside Foundry and Engineering Co., Ltd.	553
J. Esson	695	Duffield & Sons*	535
Oldroyd & Co., Ltd.	690		

SAUNDERS-ROAD SCHOOL (Improvements).—Providing new halls for each department, 35 ft. by 26 ft.; one new 50 classroom for each department; enlarging classroom B, infants', to 60, and A, graded, to 50; altering babies' room, and extending gallery; redividing existing classrooms on each floor, and providing new stepping, &c., providing new entrances, staircases, cloakrooms, and lavatories. Teachers' rooms and stockrooms for each department; providing basement under hall, and low-pressure hot-water apparatus; providing new water-closets for each department, new drainage scheme, and new coalhouse; refixing boys' covered playground, and removing railing between girls' and infants' playground. Revised accommodation: boys', 372; girls', 370; infants', 432—total, 1,174. Net gain of 24 places:—

Stimpson & Co.	£16,603	Leslie & Co., Ltd.	£15,291
Lathey Bros.	15,629	Martin, Wells, & Co.	14,574
Antill & Co.	15,394	Lorden & Son*	13,222

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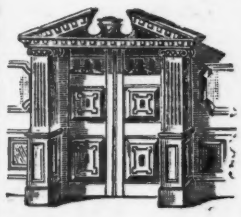

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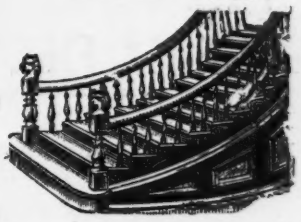

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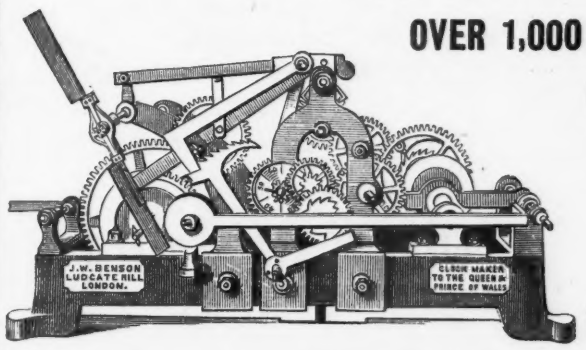

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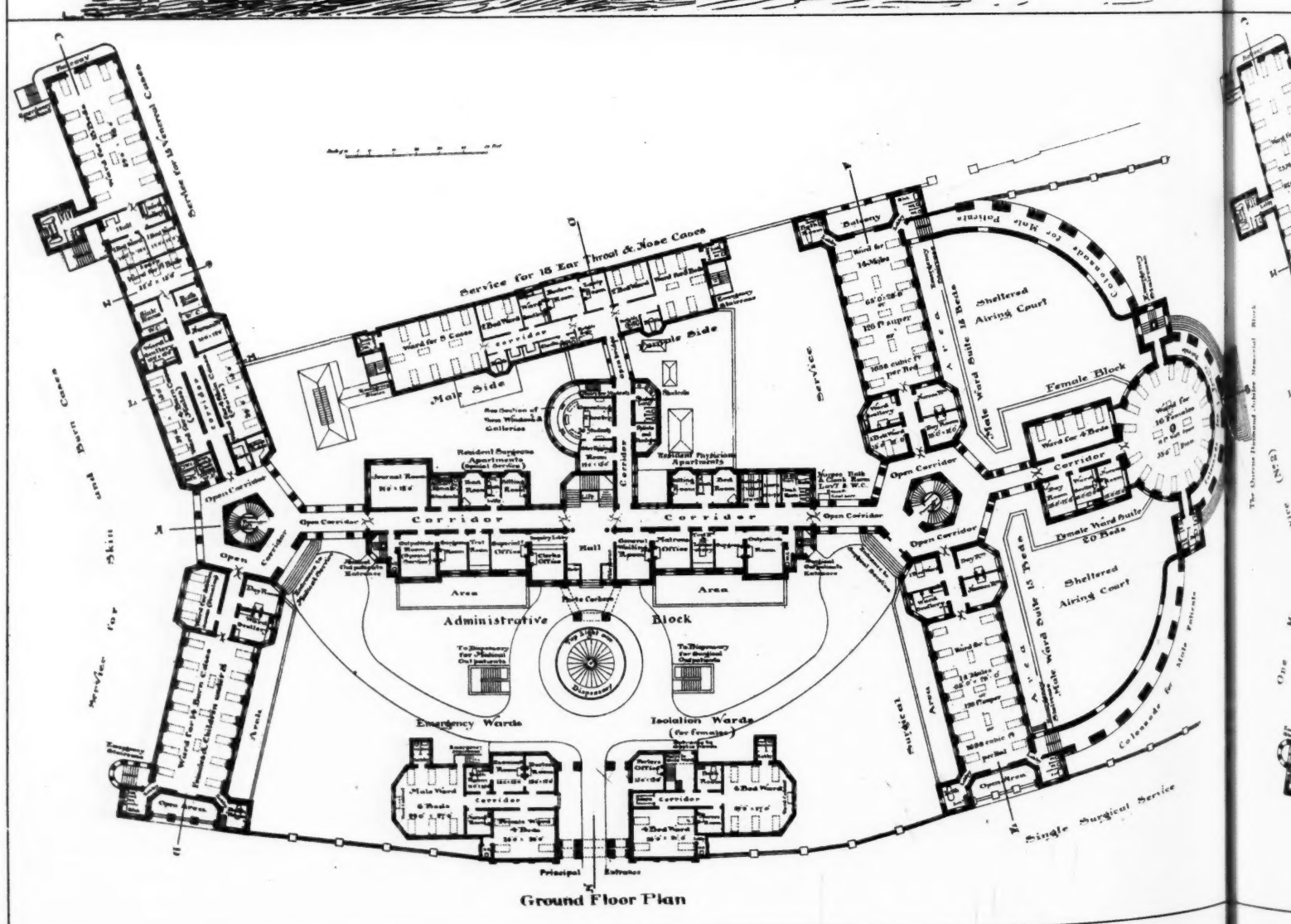

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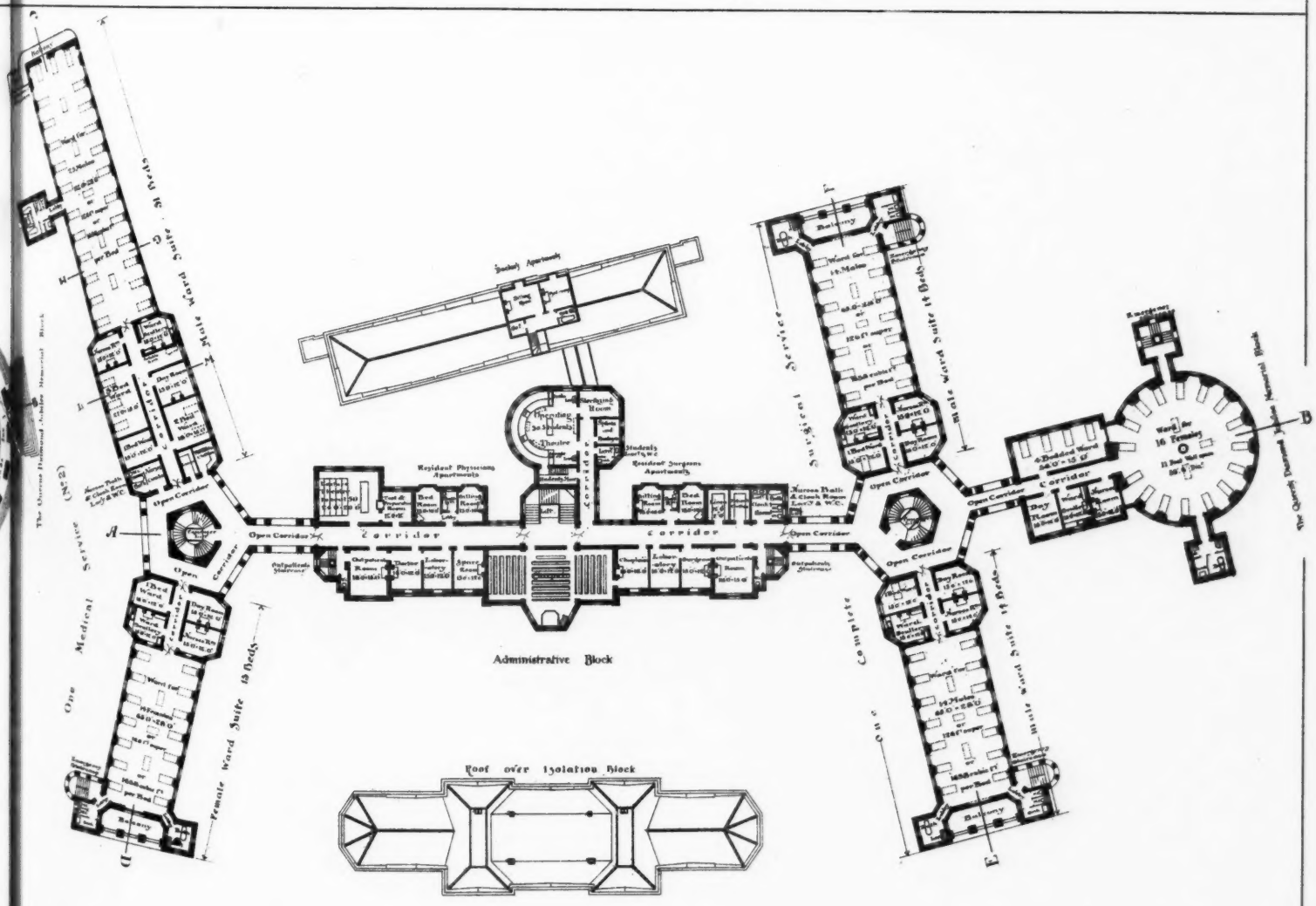
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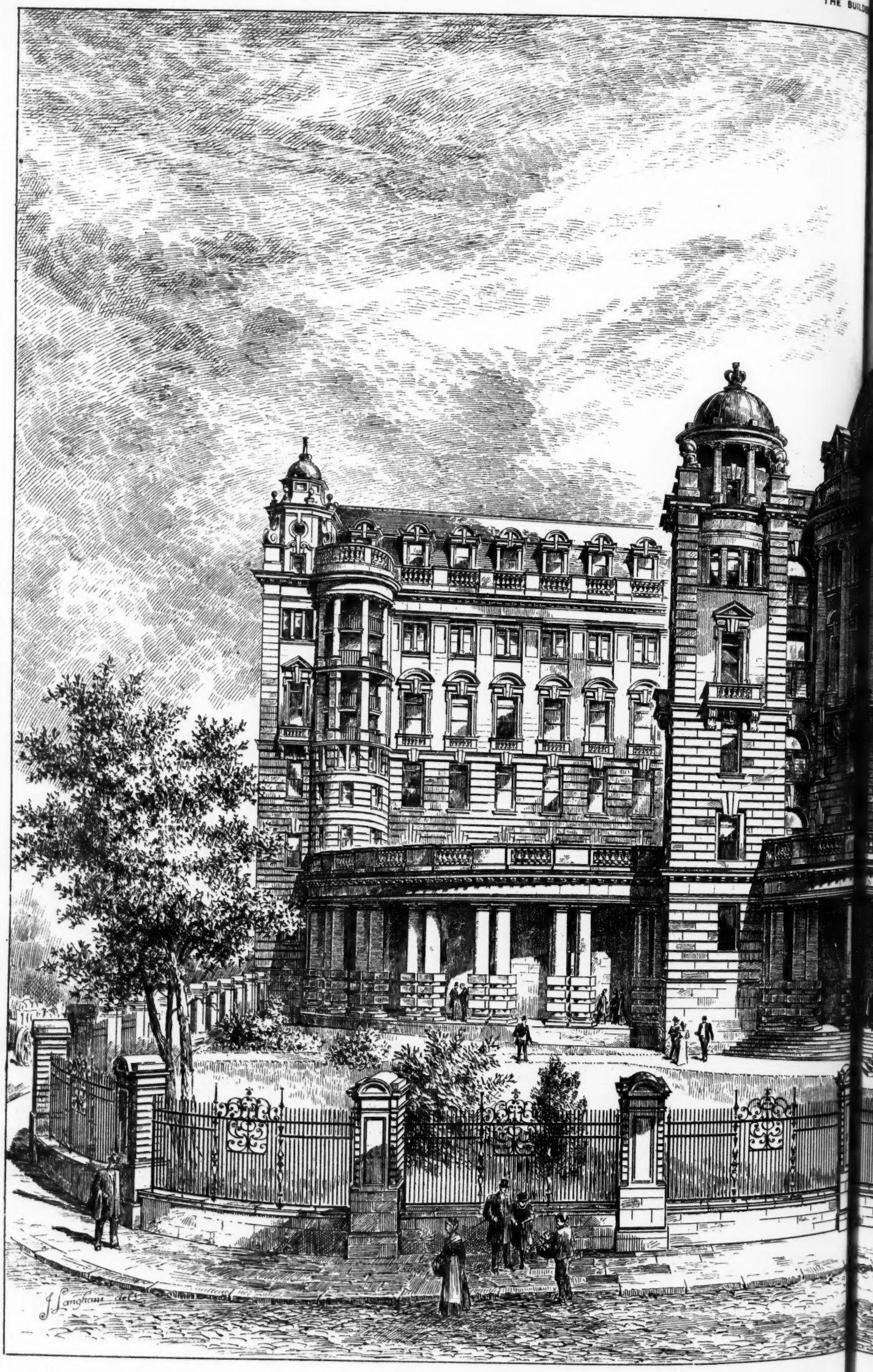

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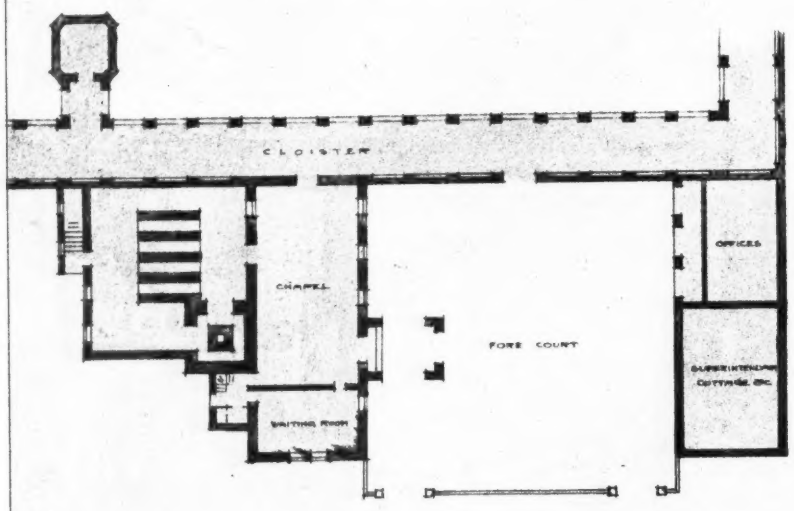

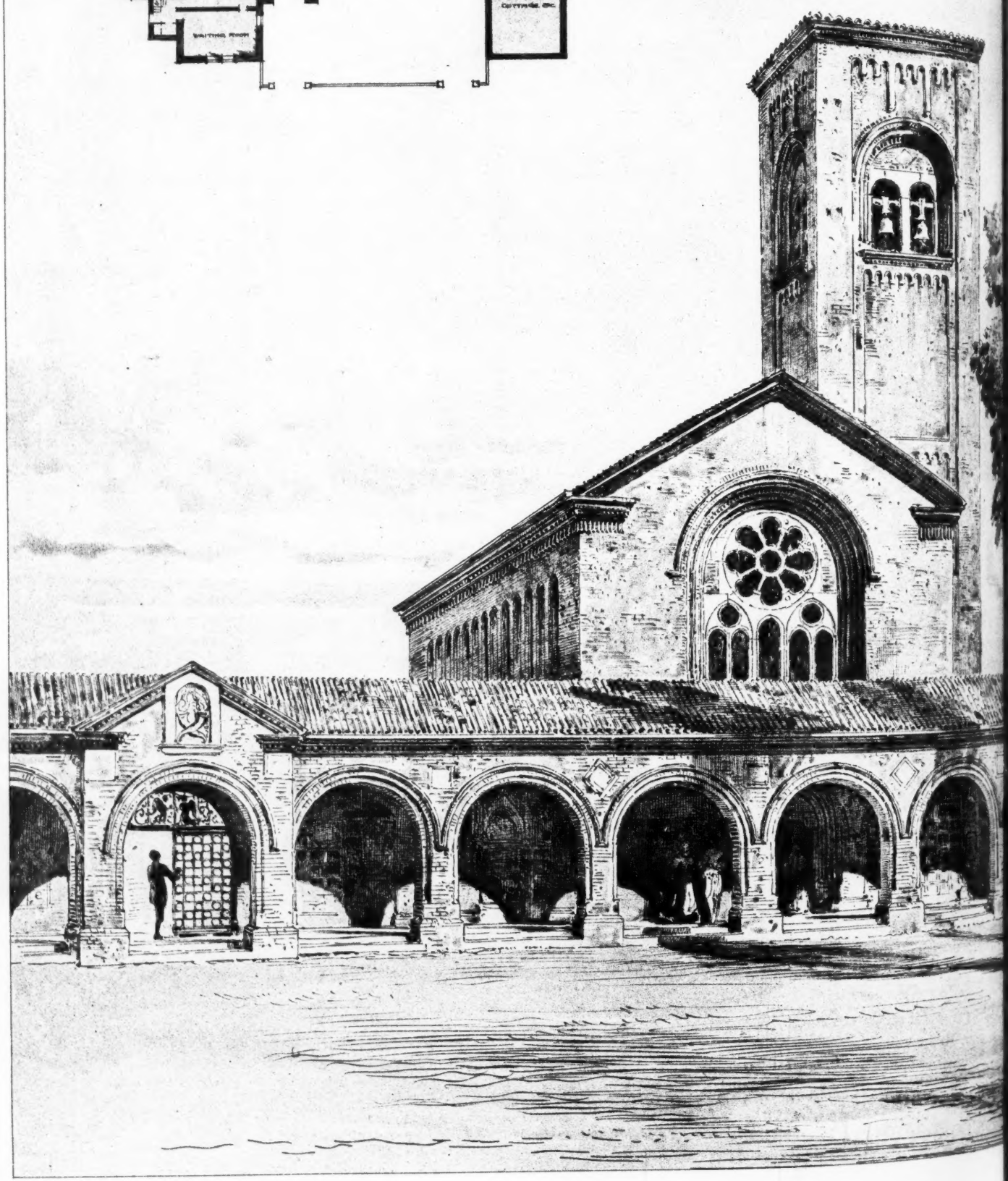

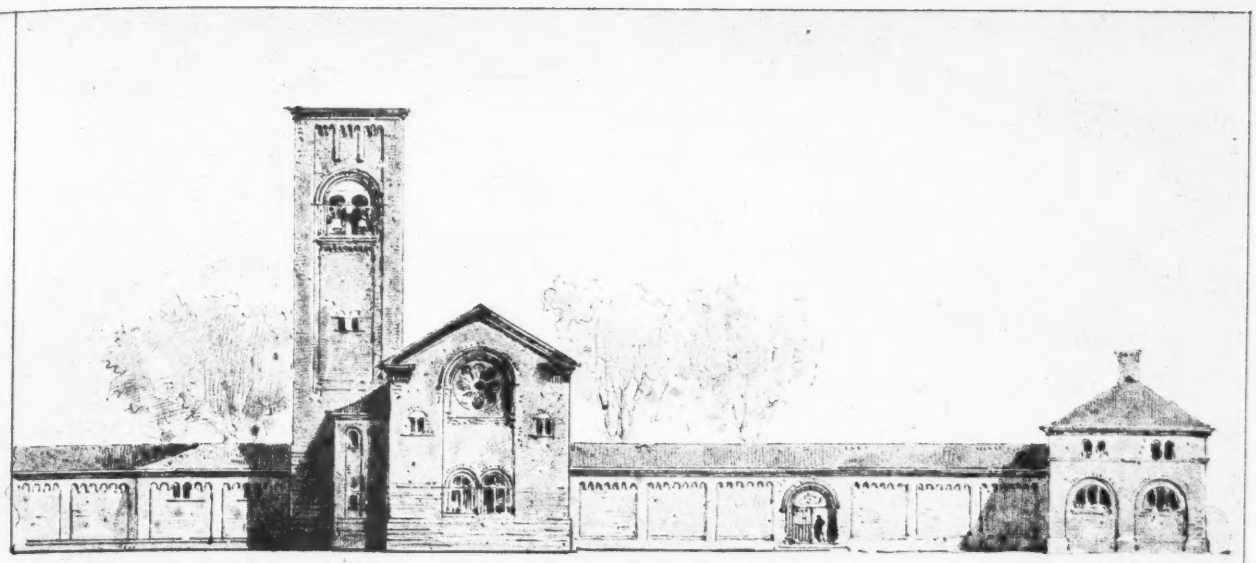

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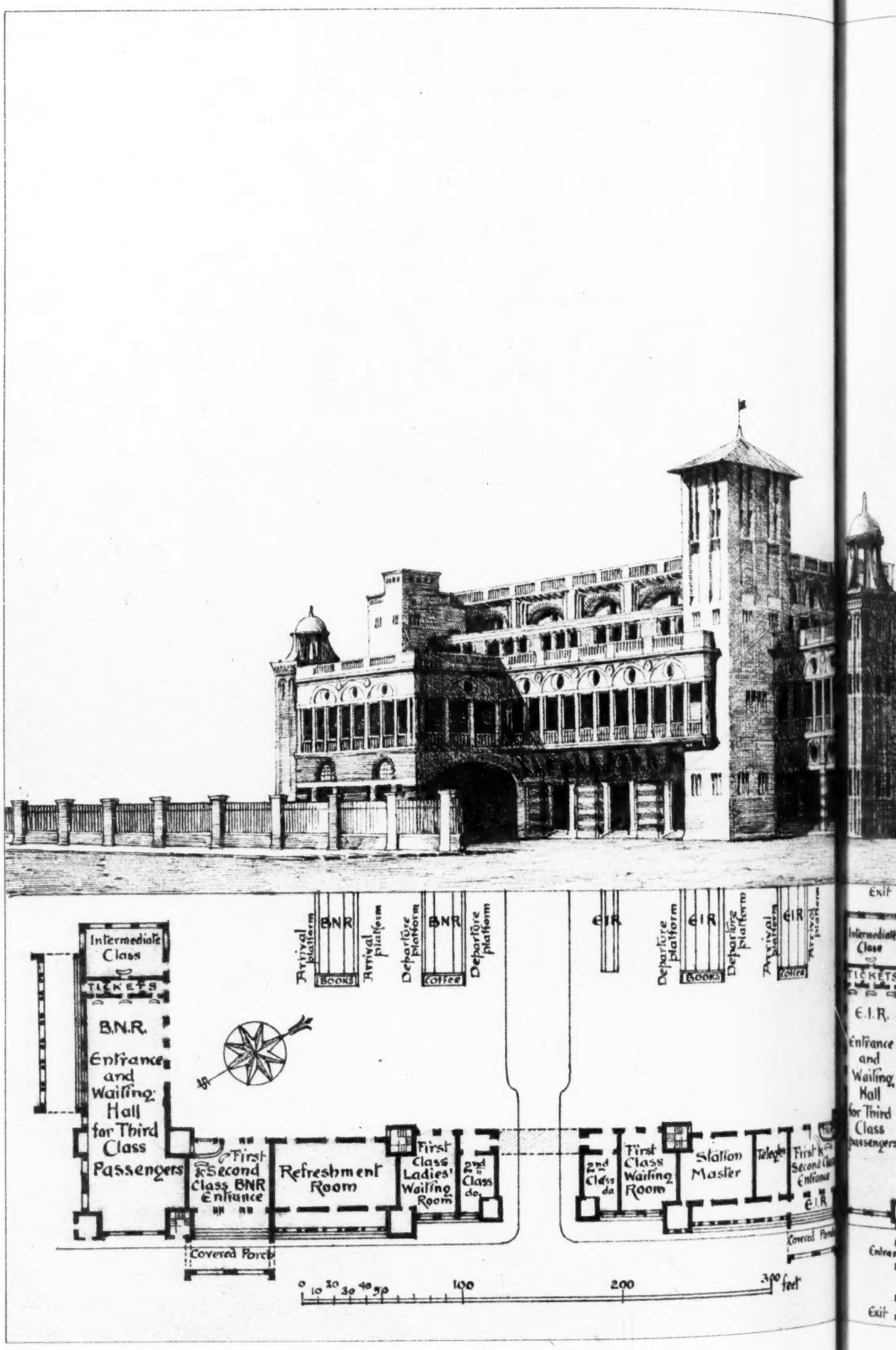
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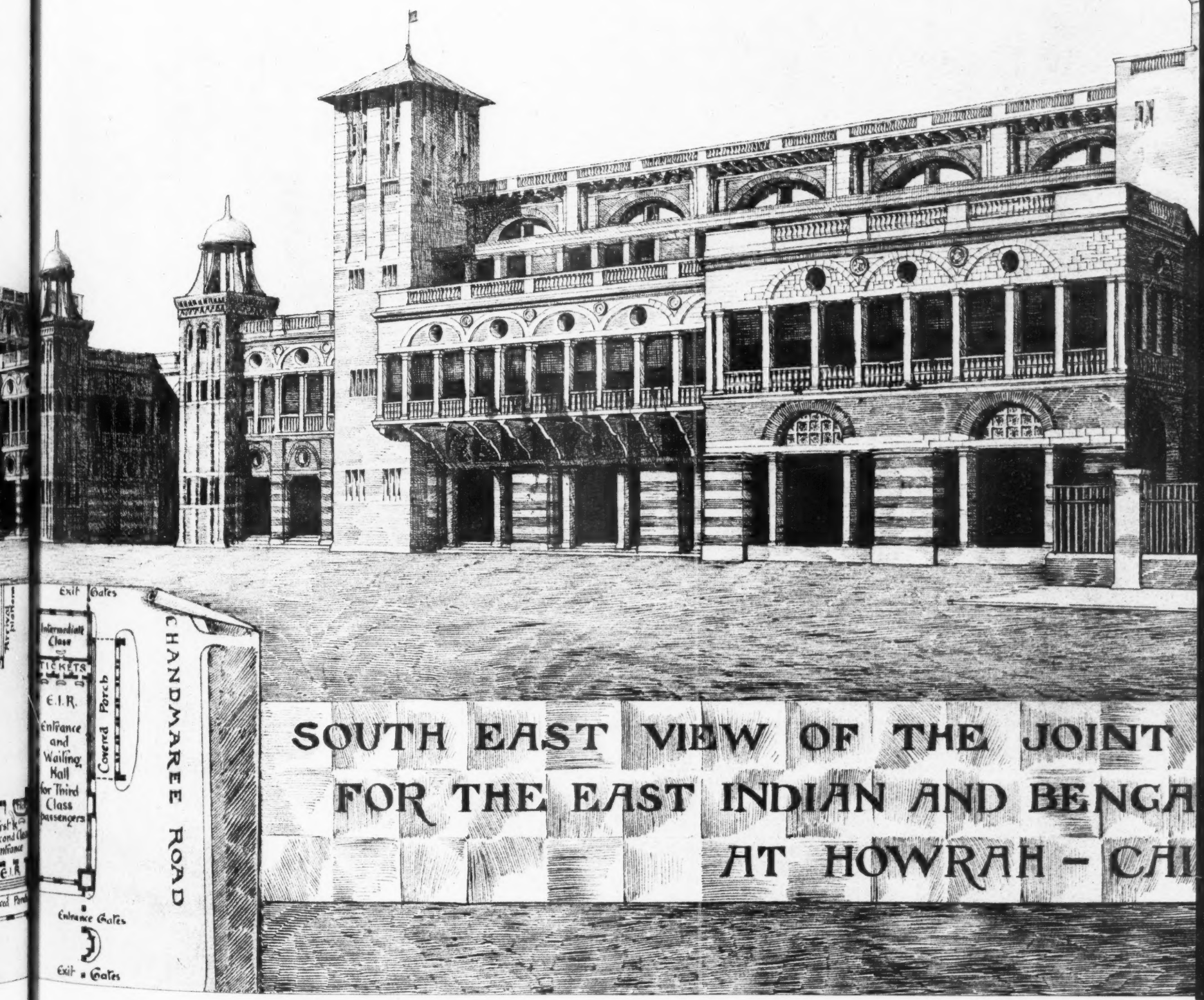

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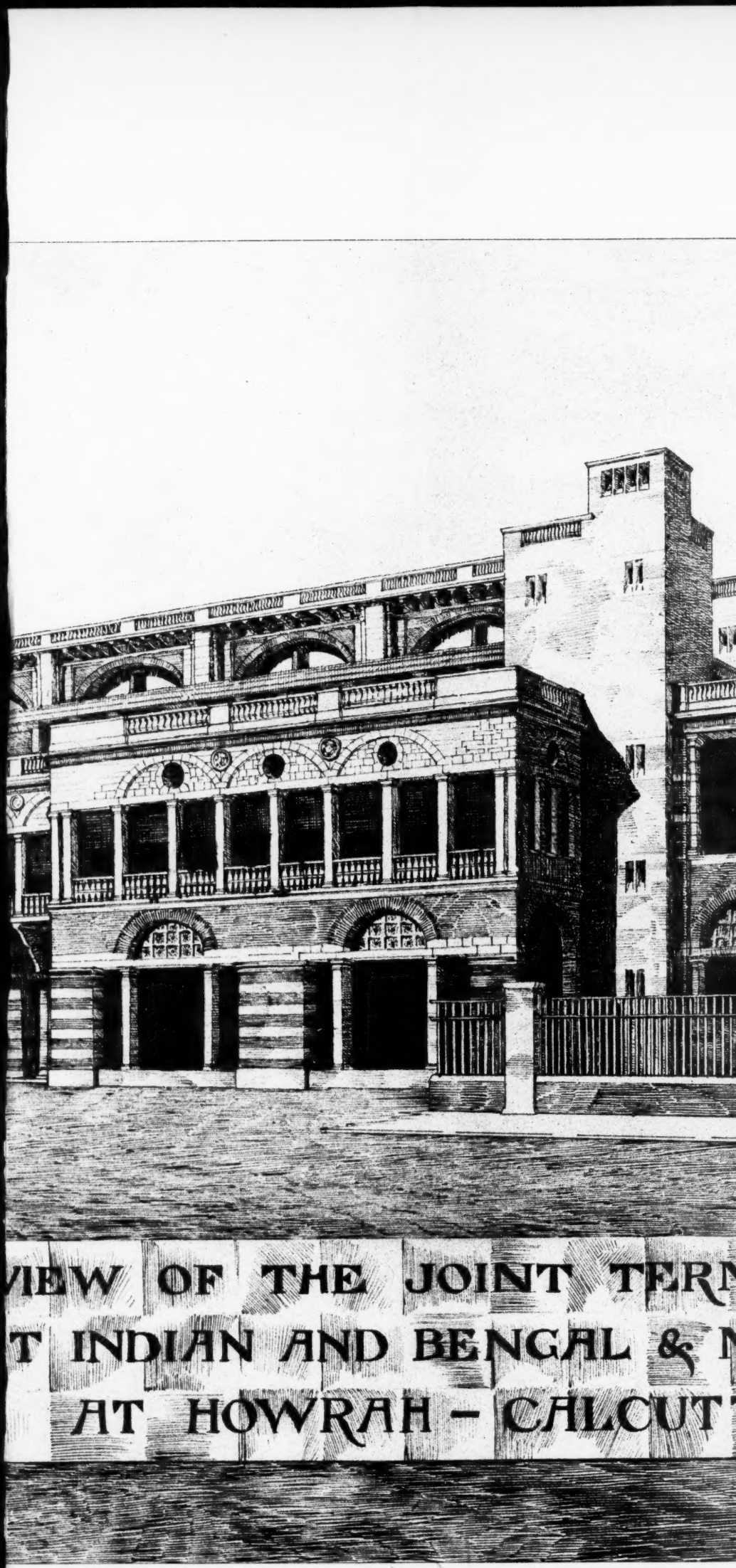

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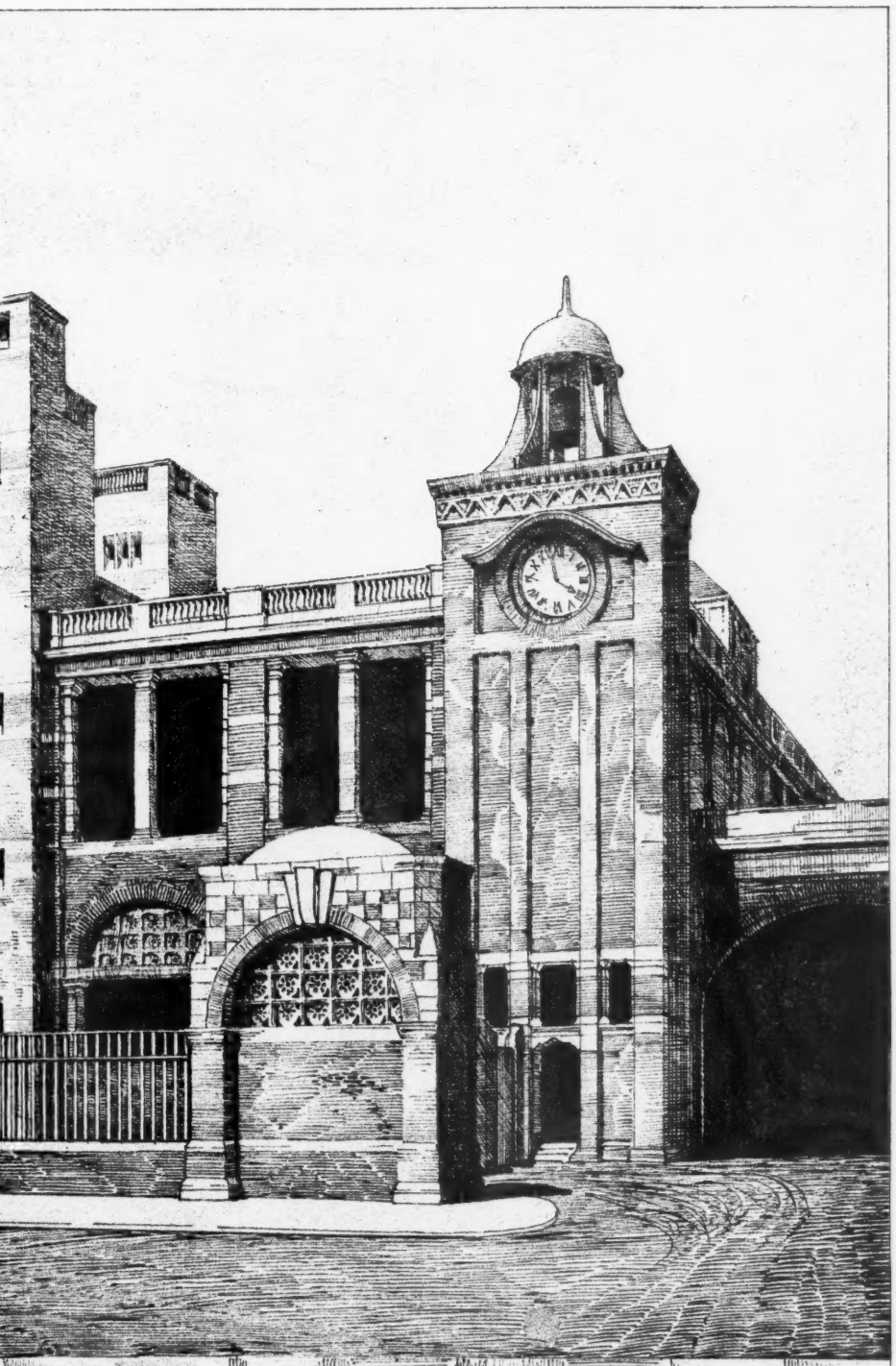

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